

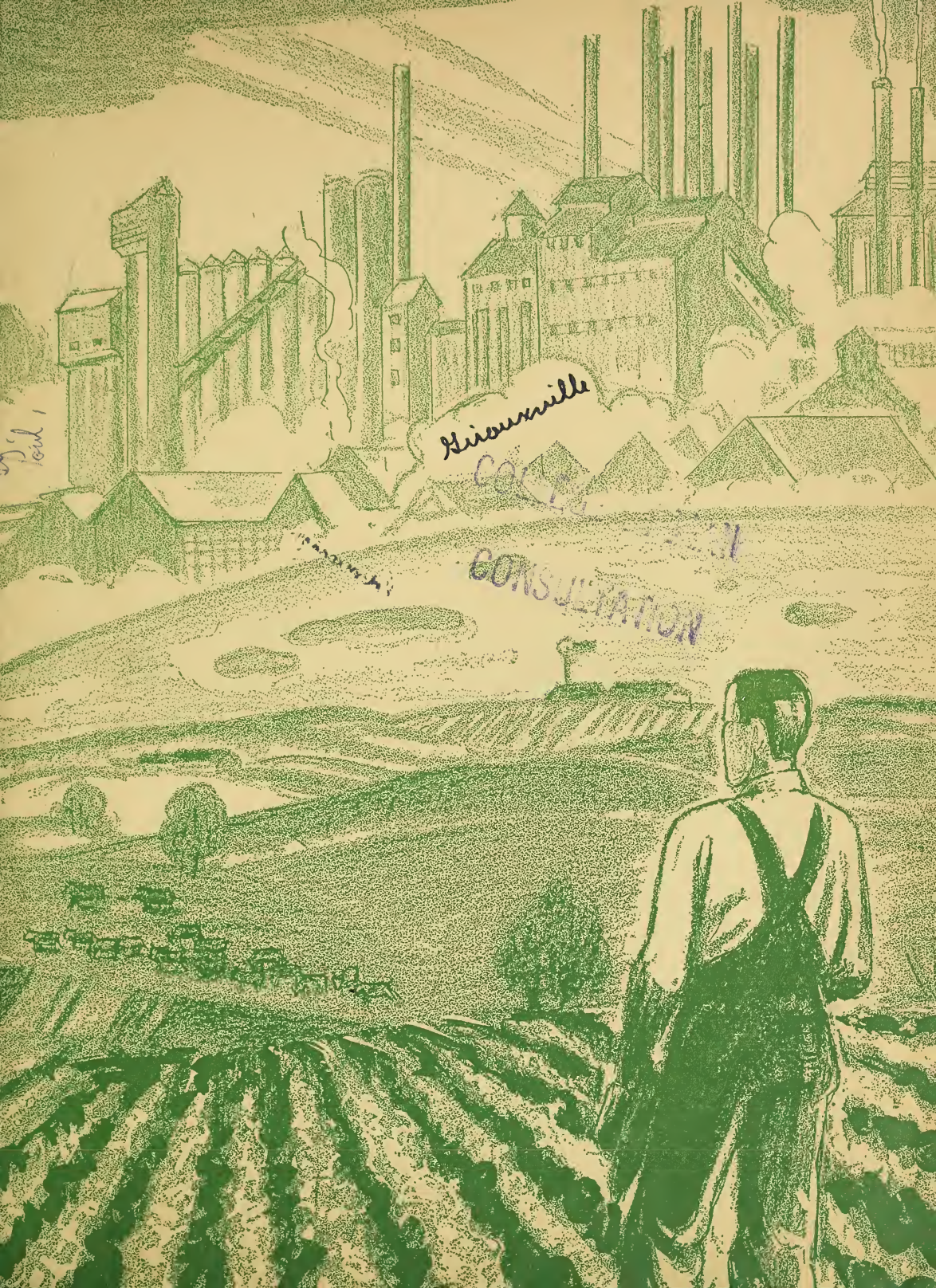


THE NEW WORLD

Past and Present

WEBB · CAMPBELL NIDA






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From the painting by Hoffman. Courtesy Chicago, Burlington & Quincy Railroad
EVER WESTWARD SPREAD THE AMERICAN PEOPLE, BUILDING A NEW NATION IN A NEW WORLD

THE NEW WORLD PAST and PRESENT

A Unified Course in History and
Geography for Elementary Schools

by

VICTOR L. WEBB

EDNA FAY CAMPBELL

WILLIAM L. NIDA

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TO THE TEACHER

In the study of *The New World Past and Present*, the pupils will be learning about their own country—its physical features, its resources, and its history. At some point in the text, they will be studying their own region, possibly the very locality where they live.

The pupils' interest in their country and their knowledge of their home community can be made most profitable. But that is not enough! Their horizon must be expanded and their viewpoint extended until they see that the story of the New World cannot be dissociated from that of other world regions. They must also see that the story of the New World, as well as that of other world regions, is about men and women and children making a living under conditions imposed by nature. In the story of the New World, the pupils first study some of the problems that a new environment forced upon the settlers. Then they will read about the successes and failures of the settlers in solving these problems and in making the adaptation to their environment.

Teachers who have had a large measure of success in teaching this book point out the fact that there is a logical progression in the concepts developed in the course of the study. A listing of these concepts will show this progression and also the fact that there is a cumulative effect in their development.

1. The white men who came to America were not savages—they had the advantage of the knowledges and skills accumulated by previous generations.
2. In almost every case, the pioneers and early settlers had only the resources close at hand with which to make a living.
3. They had to learn ways to control their natural surroundings in order to advance their own purposes—clearing land, growing native crops, utilizing water power, digging canals, irrigating, mining, and other activities.

4. The story of how natural resources were used and nature controlled is the story of man's progress in the New World.
5. Our story today is also about the use of resources and the control of nature—it is simply a more complicated story than that of the pioneer.

A desirable viewpoint would be one in which the child sees himself as an actor in this great dramatic story. He and his family live in a definite region of the New World. His people make a living there in one way or another. In doing this, they make use of the resources of the country just as truly as did the pioneers.

All this is just another way of stating the fact that the present is but an extension of the past. Once the child has sensed the fact that he and his family are in reality in the same position as that of the early settlers, because they also use resources, then will his knowledge of the past sharpen his appreciation of the present.

In large measure, this appreciation of the present must rest on a fairly substantial knowledge of certain fundamental and static geographic and social facts. The character of the mountain region, the desert, the plateau, the dry plain does not change, although political control may shift from power to power. Man-made boundaries may shift, whole countries vanish from the map, but the ways of life and the necessities of making a living remain.

Knowledge that rests on such fundamentals is a satisfactory possession. The cataclysm of war cannot take it from us; it is not subject to obsolescence. Because it is truly fundamental, it is the actual base on which we can erect a satisfactory life.

Because of this close connection between our own lives and the fundamentals to be taught in this book, the teacher should take advantage of all the opportunities afforded

for pointing out both parallels and contrasts between the people and regions dealt with in the book and those with which the child is familiar. She will find help in the teaching aids offered: maps, illustrations, suggested readings, and various other activities suited to her group.

The teacher has an opportunity, among other things, to do the following:

1. To show colorfully the beginnings of the overflow of population from Europe to America.
2. To show that the motives for emigration to America were varied, but not much different from motives for emigration today.
3. To contrast the primitive culture of the Indian occupants of the land with the more complex culture of the incoming white people, without emphasizing the idea that the primitive way was inferior.
4. To follow the development of industry, from the American phase of the Industrial Revolution to the very complex industrialism of today.
5. To follow the step-by-step shaping of a heterogeneous population into a nation.
6. To trace the growth of various social institutions.

The development of these concepts on a chronological, historical basis gives the teacher an opportunity to go from the simple to the more complex. It is comparatively easy to show the impact of nature on the pioneer settler. And it is easy to emphasize his gradual mastery of some of nature's forces, for his whole life story was that of the struggle against those forces. As time went on, man's adjustment became a more complex process than that of the pioneer. But the pupil will be able to meet the increasing complications in his stride, if the foundation work has been well done. He will have been carried from the simple to the more complex by easy, chronological stages.

In dealing with an area as large as North America, and later with South America, the reader has an opportunity to contrast and to compare a large number of geographic regions. The characteristics and resources of these natural regions take on useful meaning as the economic background of the people who live there. The pupil should be encouraged to compare the cultures of the various regions. Such comparison encourages a tolerance and understanding of environments and customs that are at variance with the familiar environment and customs of the home community.

It is relatively easy to fall into the error of making too much of the many contrasts evident between the United States and the countries of Latin America. There also exists the danger of lumping these countries together in some such convenient and non-descript grouping as that implied in the phrase "Latin America." If the pupil has gained anything from his study of the United States, he has some knowledge of its main geographic regions and their characteristics. If he learns to identify similar regions elsewhere in the hemisphere, he will gain a distinct and immediate advantage. He will be able to consider the regions there as counterparts or opposites of regions in our own country. And he will see these countries to the south as inhabited by people who must make their living on the land. It should be obvious that such a viewpoint will be a distinct aid to a sympathetic understanding.

In dealing with the countries of this hemisphere, the children will need help in realizing that there can be such a thing as a community of nations. However, they will have the groundwork necessary, if their previous work has given them some understanding of what is meant by a community. It is possible to build upon that community concept and to arrive at a genuine understanding of the fact that nations can not only be neighbors, but that there can also exist between them much the same relationship as exists between members of a community.

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TO OUR READERS

In this book you are going to read about the discovery of America and how it was gradually settled by people from other parts of the world. You will learn about different regions of our continent and our hemisphere—what they are like, how they were settled, and what the people who live in them do to make a living.

All of these things make a story that is important. It is important because it is about you and your people and your country. And so, while you are reading this book, you must try to remember that you, yourself, are one of the persons in it.

THE AUTHORS

COLLEGE & JEAN
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Fig. 1. This kind of map gives you a picture of what the land of our country is like—the mountains, level lands, rivers, and lakes. Notice that it is called a “relief” map. In this book there are other kinds of maps that will also

show you interesting things about the United States and other countries. While you are in school, and after you have left school, you will need to use maps many times. This year you will have a chance to learn to use them.



Acme Newspictures

The people on the pier have come to say good-bye to the passengers who are sailing on the steamer. The passengers know exactly where they will leave the ship five days later.

INTRODUCTION

HOW THE NEW WORLD WAS DISCOVERED

Learning about the world today. When we want to travel today, we can go to the railroad station, the bus depot, or the airport. Someone there will tell us how to reach the place we want to go. We can find out how much it will cost to make the journey and how long the trip will be. Or if we want to go by automobile, we can get a road map and study it.

There was a time, long ago, when there were no easy ways to go from place to place. And people did not have many books, pictures, and maps to tell them about far-away lands. People did not travel very much.

We can look at a map on a globe and find all the countries of the world. We can find out how wide the oceans are and how far we must travel to reach any place in the whole world. But a thousand years ago people could not find out such things. They had not heard of many of the lands. They thought the world was very much smaller than it really is.

Learning about the world a thousand years ago. Suppose we look at a map of the world today and then look at a map that is a thousand years old. We can see how little the people of that time knew about the world.

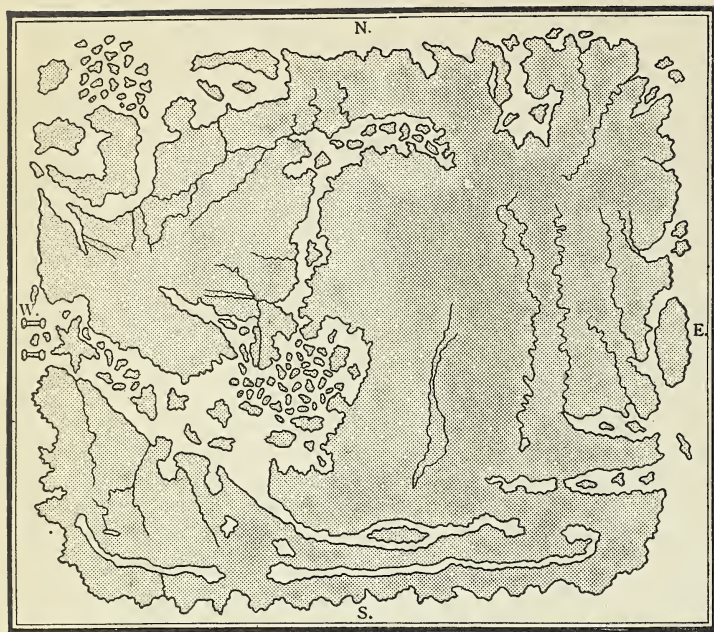


Fig. 2. See if you can find what part of the world the old map-maker was trying to draw. Compare this map with the one on page 4.

There were good reasons why people did not know much about the world. It was not easy to travel. Most people had to walk. Only a few could afford to ride horseback. Where there were roads, people could use carts drawn by horses, donkeys, or oxen. But there were not many roads, and most of them were rough and narrow.

There were boats and ships for those who had to travel by water. But the ships were small because men had not learned how to build large ones. They had not yet found out the best way to sail a ship and make the wind carry them along.

There were pirates at sea and robbers on land, and so only brave people dared to travel. But in spite of all these dangers, some men did travel. They carried goods from one country to another and sold them. When they came home, by land or sea, they talked about their adventures. Only in that way did people find out about other lands.

Some of the men who traveled made maps like the one on this page. The maps were not right, we know, but that is because the travelers did not know how to measure distances very well or how to draw the shape of the land as well as can be done today.

If you look carefully at the old map on this page, you will see that it is a part of Europe, Asia, and Africa. Can you find Italy on the map? Can you find the island that we call Great Britain? Perhaps you can find the land of the Vikings on this old map. It is a little to the left of the letter N.

The adventurous Vikings. The people of some of the northern lands fished in the ocean for a living. They carried their salted fish to other lands and traded for things they did not have at home. Find the home of the Vikings on the map on page 373.

The Vikings were good sailors and were not afraid to go far from shore. They sailed long distances to look for new places to trade. Some of the most daring Vikings sailed to the west, away from Europe, and found new lands.

We know that the Vikings found islands that were far from the shores of Europe. One of their bold seamen, Eric the Red, sailed his long narrow ship to the land we call Greenland. Find it on the map on page 373.

Eric had two sons, Thorwald and Leif Ericsson. They sailed west and south from Greenland and came to the shores of America. Because they found so many grapes growing wild, they called it Vineland. Thorwald



Visual Education Service

Fig. 3. Fair-skinned Vikings were probably the first white men ever seen by the Indians. But the Indians did not keep any records, and we have not found any records of the Vikings to tell us just where these bold seafaring men landed and why they did not stay.

wished to make his home in the new land, but he was killed by Indians.

Leif returned and told the story of the new land, but few people were interested. The new land was too far away and too hard to reach. There were plenty of places nearer home where the Vikings could fish and trade. People soon forgot that a new land had been found. We do not know just where Vineland was, but we think it was somewhere in our New England States.

Europe trades with Asia. Five hundred years passed, and the people of Europe learned more about their own land and the lands that spread out to the east. Traders made the long trip across Asia to India and to China. They brought back spices and silks, jewels and perfumes, rugs and dishes. The people of Europe had wool, tin, amber, and other things to trade for the things which the traders brought back from Asia.

The silks, spices, and other goods from the eastern countries were expensive, because the traders had to carry them a long way. It took many months to make the journey. And so people looked for a cheaper way to get these things.

One of the travelers who came back from the eastern lands wrote a book about his ad-

ventures. His name was Marco Polo. He had traveled part of the way by sea, and men began to wonder if they could not bring goods by water from the east to Europe. It would be much cheaper to bring shiploads than to pack the goods on the backs of horses and donkeys. And so men tried to find a way to reach the countries of the East by sea.

Henry the Navigator. One of the men who tried to find a route to India and China by sea was Prince Henry of Portugal. Henry was called "the Navigator" because he spent his life training sailors and sending ships to sea. Henry told his sailors to go south

in their ships and then try to sail east. Henry was sure that his men could sail around the great continent of Africa and reach India.

But Prince Henry was not the only man who wanted to find a way to reach India and China by sea. Other men in other countries wanted to find a way, too.

Toscanelli and his map. The men who searched for a sea route to the East did not agree about the best way to reach India and China. Some of them thought that the world

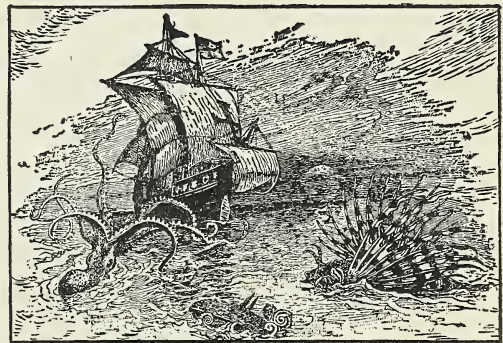


Fig. 4. On old maps the artists often drew pictures of strange animals and monsters. Sailors came to believe that those monsters would be found if they sailed far enough, and so a great many mariners were afraid to sail very far on what they called the "Sea of Darkness."



Fig. 5. This map shows the winds that usually blow across the oceans of the world. Find the winds that blow across part of the ocean near Spain. See where the winds took Columbus.

was flat, like a saucer. Others were sure that it was round, like a ball. One of the men who was sure that the world was round was a map-maker named Toscanelli. He felt sure that India could be reached by sailing west. Toscanelli read books and talked with travelers and sailors. Finally he made a map of the world. The map shows that Toscanelli did not know how large the world really is. And he did not know about two great lands which lay in the ocean west of Europe and Africa.

Toscanelli sent his map to a friend, a sea-captain named Christopher Columbus. Columbus was one of the men who wanted to find a new way to India. He had read all the books he could find and studied all the maps. He felt sure that India could be reached by sailing westward from Europe.

The studies of Columbus. Columbus studied the ocean and the winds. Suppose we find out some of the things he learned. Look at the map on page 373 and notice the arrows. They show how the water of the ocean moves in great streams. These streams of moving water are called currents. These currents are like rivers flowing on the surface of the ocean.

There is a great ocean current that flows past Spain toward the coast of South America. Find it on the map on page 373. Different parts of the current have different names. Columbus knew about this current, but he did not know where it went. He hoped that it would help to carry his ships all the way to India.

Columbus also knew about the winds. Look at the map on this page and notice the

arrows which show the direction of the winds. Notice that the winds and the ocean currents move in the same direction.

Columbus studied the winds and currents because ships had to depend on them. The only ships in those days were sailing ships. A strong wind in the right direction and a good current meant a quick voyage.

Columbus at the court of Spain. A great many people laughed at Columbus when he said that India could be reached by sailing to the west. They laughed because they knew that India and China could be reached by traveling east.

At last Columbus persuaded the king and queen of Spain, Ferdinand and Isabella, to let him have three ships and enough men to sail them. The Spaniards wanted to find a sea route to India and China before their neighbors, the Portuguese, found one. If Columbus was right, the Spaniards knew that

their ships could bring back rich cargoes from the lands of the east. Spanish traders would grow wealthy selling the cargoes to the people of Europe.

Columbus sails. One morning in August, 1492, Columbus set sail from the city of Palos in Spain. His three little ships were the *Santa Maria*, the *Pinta*, and the *Niña*. Columbus thought that he would reach India in two months.

But two months passed, and the three ships had not reached India. The sailors grew afraid. They did not see how they could sail back against the wind and the current.

At last a sailor saw some seaweed in which a crab had been tangled. Then a flock of birds appeared. Soon one of the men saw a small branch from a tree floating in the water. And so they knew that land was near.

A New World. On October 12, 1492, land was seen, and the next day the little

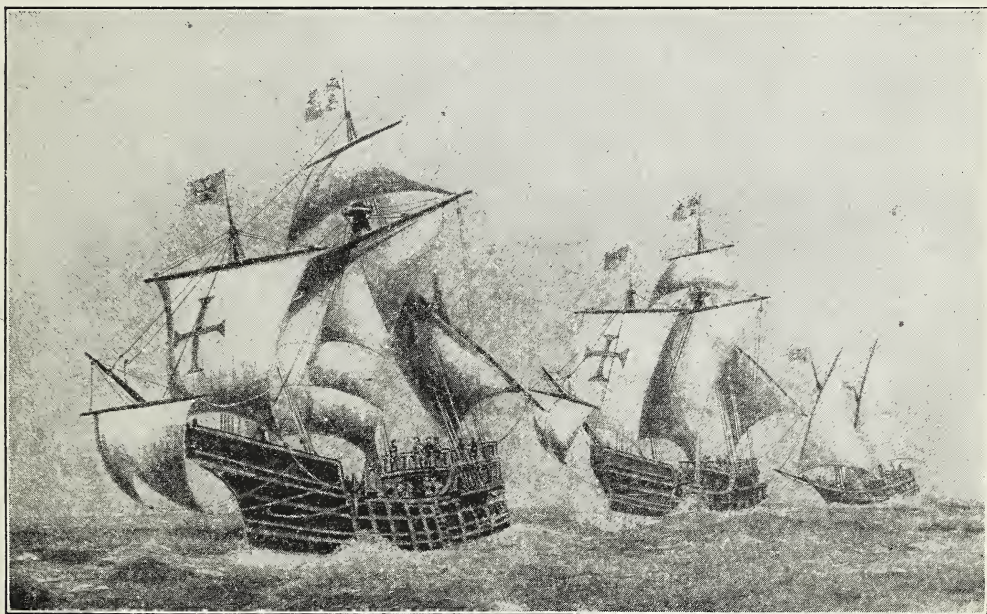


Fig. 6. These are the three ships of Columbus, the *Niña*, the *Pinta*, and the *Santa Maria*. The *Santa Maria*, the largest of the three ships, was only sixty-three feet long and carried fifty-two men. Some of our great ocean liners today are one thousand feet long and can carry thousands of people. They cross the ocean in a few days; it took Columbus two months.



Fig. 7. Years after Columbus landed with his men on an island in the New World, an artist made this picture of what he thought happened.

ships anchored. The journey had taken ten weeks. Columbus had found a small island, which he thought was near India. When dark-skinned natives came to the shore to meet the voyagers, Columbus called them Indians. We know now that he had landed on one of the Bahamas and that he was still thousands of miles from India.

Columbus named the island San Salvador, and sailed around other islands that were near. Some of the natives of these islands wore necklaces of gold. When the Spaniards tried to find out where the gold came from, the Indians pointed to the south. Sailing in that direction, Columbus found more islands but no gold. At last he decided to return to Spain for more ships and more men.

Columbus found the Spaniards eager to hear of his adventures. When he showed them the parrots he had brought with him, the Indians who had been captured, and the gold which the Indians wore, the Spaniards were excited. Many begged to go with him on his next voyage.

Other voyages of Columbus. Before long Columbus was ready to sail again with seventeen ships. Fifteen hundred men crowded into the ships, taking

with them horses and cattle. Some of the men were farmers, some were missionaries, and some were soldiers. All of them hoped to find gold and become rich. But none of them knew that Columbus had found a New World.

On his second voyage, Columbus discovered the islands of Puerto Rico and Jamaica. He also explored the southern coast of the island of Cuba.

Columbus made four voyages in all. On his third and fourth voyages he explored the coast of Central America and part of South America. But he did not find the land of silks and spices of which Marco Polo had written. He did not know he had found a New World.

Columbus made only four trips to the new lands. As his ships did not bring back rich cargoes, the Spaniards complained that he had deceived them. He was poor and almost without friends when he died. But we know that he was a man of courage.

Spaniards in the New World. Some of the Spaniards settled on one of the islands. Although they called it Hispaniola, or Little Spain, we know it as the Dominican Republic. Find it on the map on page 414. Less than a month after they arrived, the Spaniards found gold in the sands of one of the rivers.



James Sawders

Fig. 8. Probably the Spanish explorers saw many scenes like this one. There were many miles of rough, mountainous land along the seashores. Their land at home was like that.



James Sawders

Fig. 9. A stone calendar carved by Indians who lived in Central America before the Spaniards came.

The Spaniards forced the Indians to dig for the gold and to work in the fields where they planted sugar-cane. But the Indians were not used to hard work, and many of them died. Others ran away. And so the Spaniards brought Negroes from Africa to work for them as slaves.

Some of the Spaniards continued to hunt for gold, but the farmers from Spain found another way to get wealthy. Sugar-cane grew fast in the islands, and they soon had large quantities of sugar, molasses, and rum, all made from the cane, to sell to people in Europe.

Before long there were Spanish towns in Haiti, Cuba, Puerto Rico, Jamaica and other islands. Find them on the map on page 414. We call them the Greater and the Lesser Antilles, or West Indies. There are hundreds of them, large and small, lying in a curve that is almost 1200 miles long. You can see that they are not far from Mexico or the narrow part of the mainland which we call the Isthmus of Panama.

Not all the men who came from Spain to the islands were willing to plant sugar-cane and become farmers. Some wanted to find new lands and discover gold. Many of these men sailed on to the west until they came to the mainland of Mexico.

Here they found little coral islands or low, swampy beaches. The low land next to the sea, or coastal plain as we call it, extended for miles. It was a jungle of trees and bushes and vines. The Spaniards had to hack their way through with knives. Swarms of flies and mosquitoes covered them.

Beyond the jungles were mountains. As there was gold in the mountains of Spain, the Spaniards thought that they would find gold in these mountains. So they forced their way through the jungles to the mountains. Higher in this mountainous region they found many small valleys.

The American Indians. A number of Indian tribes lived in these new lands that the Spaniards found. The Indians of the lowlands were farmers and hunters. They grew

squash, corn, beans, tobacco, cotton, and fruits. They wove blankets and made pottery. They hunted in the forest with bows and arrows, or fished from their dugout canoes. They lived in huts made of branches and leaves.

The Indians of the highlands lived in a different way. They were not only better farmers than the lowland Indians, but better builders. They knew how to mine gold and silver and how to carve stone. They built temples and palaces of stone and constructed roads.

The Aztecs of Mexico. In a highland plateau of the land we call Mexico lived a nation of Indians known as Aztecs. Their city, which we call the city of Mexico, was on an island in a lake. It was reached by a stone road built above the water.

The Aztecs had an old legend about a white god. They said that once a white god came to them and showed the people how to plow and reap, and how to irrigate their fields, how to build houses, and how to work in silver and gold. Then the god went away. But he promised that some day he would return. We will see how that old story helped the Spaniards.



Herbert Photos

Fig. 10. The Aztecs built large pyramids of stone and ornamented them with stone carvings. Here is one near the old city of Mexico.



Acme Newspictures, Inc.

Fig. 11. The Indians of Peru could also build out of stone. This Indian of today is pointing to a large stone in a wall that was built hundreds of years ago. Notice how carefully the large stone was cut and the other stones fitted around it. The builders did not use any mortar when they made such walls. Look at the picture on page 433. It shows one of these old walls which is part of a building still in use.

The Incas of Peru. Hundreds of miles farther south, in the valleys and highlands of Peru lived the Incas. They were like the Aztecs in many ways. They had a great capital city, Cusco, with large temples built of stone. They had roads between their different cities and towns. They knew how to cut the mountain slopes into terraces and irrigate the fields. They mined gold and silver.

Balboa discovers the Pacific Ocean. The Spaniards heard of the gold of the Incas, and set out to get it. One of these adventurers was named Balboa. He had no money, and so he hid in a barrel on a ship bound for Panama. When he landed, he made friends with the Indians. From them he learned that there was another ocean on the other side of the mountains.

Balboa cut his way through the jungle, climbed the mountains, and finally came to the other ocean. He called it the South Seas; we call it the Pacific Ocean.

Pizarro and the Inca gold. Balboa did not find the gold of the Incas, but another Spaniard did. Pizarro and his soldiers attacked these peaceful Indians of Peru. The

Spaniards conquered the land and took the gold. They pushed on and conquered the Indians in the lands we call Colombia and Venezuela. In the south they conquered the land now called Chile. They built cities and brought all the Indians under their rule.

Cortez and the Aztecs. Spaniards, who lived in Cuba, heard about the gold of the Aztecs in Mexico. Hernando Cortez and about five hundred men were sent to Mexico to get the gold.

When the Spaniards landed, they were met by some Indian chiefs. The Indians thought that Cortez might be the white god they had been expecting.

Cortez built a fort and then marched inland to Mexico City. He seized the chief of the Aztecs, Montezuma, and captured the city. Spaniards settled there, and the city grew.

How the Spaniards spread out. You have read how the Spaniards spread from one island to another. You have read how the stories about gold brought adventurers to the mainland. And you know how Spaniards first came to settle in Panama, Mexico, and South America. But there were other Spanish adventurers besides these men.

One of them was Ponce de Leon. He sailed from Puerto Rico to Florida, looking for Indian slaves. The Indians told him of a magic spring whose water would keep people young. De Leon tried to find it for months.

Another adventurer was De Soto. He also sailed to Florida and then wandered over the land looking for gold. He found the great Mississippi River and died near it, but he did not find any gold.

Still another Spanish captain, Francisco Coronado, had heard stories about rich cities where the Indians owned all the gold they wanted. So he set out to find and conquer these rich cities. He took with him three hundred fifty soldiers. But what was more important, his men took along many horses, cattle, and sheep.



Fig. 12. This map shows some of the routes taken by Spanish explorers in the New World. There were many other explorers who sailed along the coasts of North and South America.

Coronado marched his men slowly through the region that is now New Mexico, Arizona, Oklahoma, and Texas. They even got as far north as Kansas. In this land they saw thousands of "humpbacked cows" as they called the buffalo. Although they came to many Indian villages, they never found the rich cities full of gold.

Some of Coronado's horses ran away, and in a few years there were herds of wild horses roaming the plains. As the Spaniards moved along, some of the cattle and sheep were left behind. These were the first cattle in America.

The Spanish Empire in the New World. The Spaniards owned a large empire in the New World. It stretched across our country from California to Florida and to the south for four thousand miles. Spaniards had built cities in different parts of the new lands, and Spanish farmers were raising cattle, sugar-cane, fruit, and grain.

Other countries wanted a share of the riches in the New World, too. The story of how they tried to get their share makes an exciting part of the story of the New World.



Fig. 13. Map of North America



Fig. 14. Henry Hudson, an English explorer, made voyages in his ship, "The Half Moon," for a Dutch company that wanted to trade with the New World.

EUROPE EXPLORES THE NEW WORLD

OTHER NATIONS FOLLOW THE SPANIARDS

How the New World got its name. You may wonder why the new world was named America, even though it was discovered by Columbus. It was named for Americus Vesputius, an Italian sea-captain who made several trips to the new land. He wrote an account of his voyages, and soon people in Europe were talking about the new land in the western ocean. By this time they knew that it was not a part of India as Columbus thought, but a new land. A German who printed the story of Americus suggested that the new land be named for this explorer. And so people began to call the land America.

The Portuguese find a sea route. While the Spaniards were busy settling the islands and exploring the mainland of the New World, the Portuguese were not idle. One of their captains had found a way to reach

India by water. Vasco da Gama had sailed around Africa, and his ship had brought back a rich cargo.

Spanish ships were busy bringing gold and silver from the New World to Spain. And Portuguese ships were busy bringing spices and tea, silks and rugs, jewels and perfumes from India and China. Spain and Portugal had almost all the shipping business.

Other countries seek their share. Other countries in Europe were not willing to have Spain and Portugal divide the trade. They wanted their share. They wanted to find another route to the rich lands of the east so that their own ships could bring back valuable cargoes.

By this time people knew that there were two whole continents west of Europe. A captain named Magellan had sailed west and

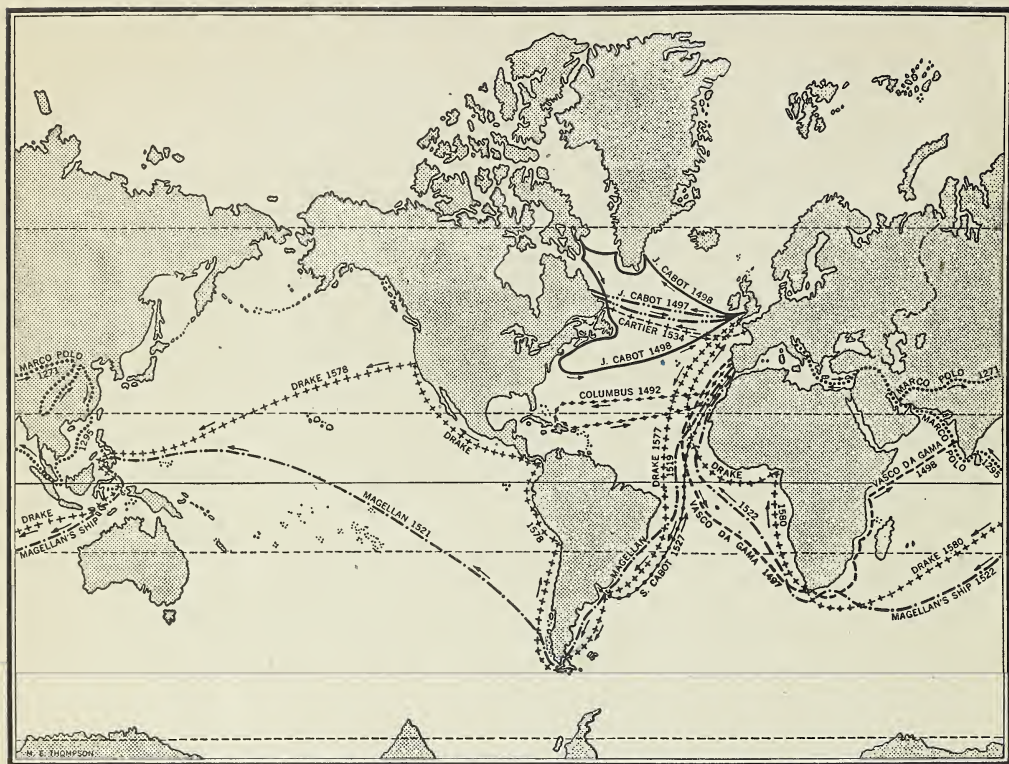


Fig. 15. These are the routes taken by some of the most noted explorers.

south from Spain and found his way through the straits at the southern tip of South America. Find the straits named for him on the map on this page. Magellan was killed by savages in the Philippine Islands, but one of his ships got back to Spain. This voyage proved to everyone that the world was round.

The Northwest Passage. Other sea-captains thought that there must be a water passage through North America from the Atlantic Ocean to the Pacific Ocean. They knew it was not in South America, nor near Mexico, because explorers had looked for it in those regions. And so they thought it must be somewhere in North America. They called it the "Northwest Passage," even though such an opening was never found.

A French explorer, Jacques Cartier, sailed for North America. When he found the

broad opening of the St. Lawrence River, he thought that he had found a passage to India. But when he explored farther, and made other voyages, he knew that he had found only a large river.

Frenchmen settled along the St. Lawrence River and found that they could make a living. Some of them traded with the Indians for furs. Others found their way to the fishing grounds near Newfoundland. It was easy to sell furs and fish from the New World to the cities of the Old World.

The English take a share. English sea-captains looked for the Northwest Passage, too. The English wanted a share of the rich trade with India. Francis Drake sailed his ships along the east coast of South America, and then up the west coast. When he came near Peru, he met some Spanish ships loaded

with gold and silver from the mines of the Incas.

Drake plundered these Spanish ships. He did not dare sail back the way he had come, because he knew that Spanish war ships would be looking for him. So he sailed northward, stopping at almost every bay and large river to see if he could find the Northwest Passage. Notice where he went on the map on page 12.

Drake finally gave up the search for the passage and sailed westward to the East Indies. Then he sailed around Africa and at last reached England. The queen, Elizabeth, made him a knight, and gave him permission to capture other Spanish ships.

The Spaniards fight back. Drake made several voyages to the West Indies and captured many Spanish ships. His men also captured cities in the islands.

The Spanish king determined that he would win his quarrel with the English. He built a great fleet called the Armada, and sent it to England to destroy the English ships. But the fast little English ships sank many of the clumsy, slow Spanish vessels, and a storm destroyed most of the rest of them.



Fig. 16. The French explorer La Salle claimed the country around the mouth of the Mississippi for France after he had traced the river from its upper waters.



Fig. 17. Walter Raleigh and other boys of his day had their minds filled with stories of far-away lands where there were rich mines and great wealth. They day-dreamed of vast forests and exciting adventures.

As the Spanish fleet was defeated and sunk, the Spanish trading ships had no protection. English ships could go where they pleased, and England could take her share of trade.

What the English needed. The English knew that they would need many ships if they wanted to have colonies in the New World. In those days ships were made of wood, and England had used almost all of the lumber from her own forests. But there was plenty of lumber in the forests of the New World. And these forests would also supply pitch and tar to make the ships water-tight.

Colonies had made Spain a rich nation, and the English thought that colonies would make them rich, too. Many Englishmen wanted their country to send settlers to the New World. Sir Walter Raleigh was one of them.

Raleigh got permission from Queen Elizabeth to start colonies in America. He sent out an expedition to explore the coast between the colonies of the French in the north and the islands of Spain in the south.

When his men returned, they said they had found a beautiful country. They called this new land Virginia.



Metropolitan Museum of Art

Fig. 18. The English artist who painted this picture is showing Queen Elizabeth bidding goodbye to Sir Walter Raleigh, who is about to sail on an expedition to South America. Although Sir Walter had persuaded the Queen to let him send many expeditions to North America and try to found colonies in Virginia, the Queen never permitted him to go to the colonies.

Raleigh now sent a colony of about one hundred men to the new country to make a settlement. They settled on Roanoke Island, North Carolina, in 1585. These men did not make friends with the Indians; so they could not get food from them. By spring the settlers were homesick and almost starved. They were glad when one of Drake's ships came and carried them back to England. These men had found some new plants, among them the white potato and tobacco, in the new country, and they took some home with them to grow.

The "Lost Colony." Two years later, Raleigh sent out another colony of both men and women. A settlement was made on Roanoke Island (see the map, page 107), and John White was made governor of the colony. Here, in the same year, little Virginia Dare was born. She was the grand-

daughter of the governor, and the first white child born in America.

This is all that is known about little Virginia. The colony was suffering so much from lack of food that Governor White went back to England for help. Before sailing, he made the colonists promise that if they left Roanoke Island, they would carve on a tree the name of the place to which they went.

England and Spain were at war at this time, and most of their fighting was done on the sea. Because of this, John White could not get back to Roanoke Island for four years. When he finally did return, expecting to find his little four-year-old granddaughter, the island was deserted. Carved on a tree was the one word "Croatan," the name of a neighboring island. Search was made for the colonists, but they were never found. To this day this is known as the "Lost Colony."

Sir Walter Raleigh spent a great deal of money trying to found a colony in America, and all that he ever received in return was some potatoes and tobacco. However, he had started the idea of an English colony, and other Englishmen were interested in it. Then, too, they were interested in settling America for another reason—they had heard stories of great wealth the Spaniards had found in South America. They thought that surely there must be much gold in North America, and they wanted to get some of it.

QUESTIONS TO ANSWER

1. The early inhabitants of northern Africa had sailed as far north as Great Britain. Why was it so long before ships sailed to America? 2. Why was spice so important to the people of Europe? What article of food would you find it hardest to do without?

3. People in Columbus's time would have had a hard time if they had lost the spice trade with the East. Would we have as hard a time in getting along without trade with foreign countries? Think carefully before you answer. You may not all agree in your opinions. Make a list of all the things you can think of that we get from Europe and Asia and decide whether or not you could do without them. 4. Why did the European nations want colonies? Make lists of all the reasons you can think of why colonies were sought.

THINGS TO DO

1. On a large outline map of the world show, as nearly as you can, in different colored chalk, the voyages of Columbus, Magellan, Cartier, and Drake. Label each line with the explorer's name. In the same chalk you used for Columbus, color the part of the New World that Spain claimed. In the same chalk you used for Cartier, show the land France claimed. Show what land England claimed, using the color you did for Drake's voyage. Of course you cannot show exactly the territory each nation claimed, but you can give a general idea.

2. Make a collection of pictures of ships and have an exhibit of them on the bulletin-board in your room. You might go as far back as the early Phoe-



Fig. 19. A part of the shore of Roanoke Island today.

nician or Roman ships, or you could start with a picture of a Viking boat, such as Leif Ericsson might have used. Find a picture of Columbus's three ships and pictures of ships such as Sir Francis Drake and Cartier may have used. You can include pictures of the *Mayflower* and later ships. End your exhibit with pictures of some of the big ocean liners of today. These pictures will help you understand why it was a long time before men discovered and explored the New World.

3. Sir Walter Raleigh and Sir Francis Drake had many interesting adventures, and many exciting stories have been written about them. Find some of these stories in your school or public library and bring them to class. You can tell the class some of the tales that you found most interesting.

4. Look up the story of the Spanish Armada and report to the class on it. You may be able to find some pictures showing the little English ships fighting the big Spanish galleons. *Historic Ships*, by Holland, may be of help to you in preparing this report and in preparing the picture exhibit of ships suggested above. See if it is in your school library.

5. Write a report on one of the early explorers who came to the New World. You may find suggestions for a choice in *Boys and Girls of Discovery Days*, by Carolyn Sherwin Bailey. "The Boy Christopher Columbus Loved," pages 54-67, and "The Boy for Whom Our Country was Named," pages 68-79, are two interesting stories in this book.

6. Imagine yourself one of Magellan's sailors and write a short account of some exciting experience you might have had. To learn more about his trip, you might read *Historic Ships*, by Holland, pages 127-146, or *Real Stories of the Geography Makers*, by Faris, pages 87-92.

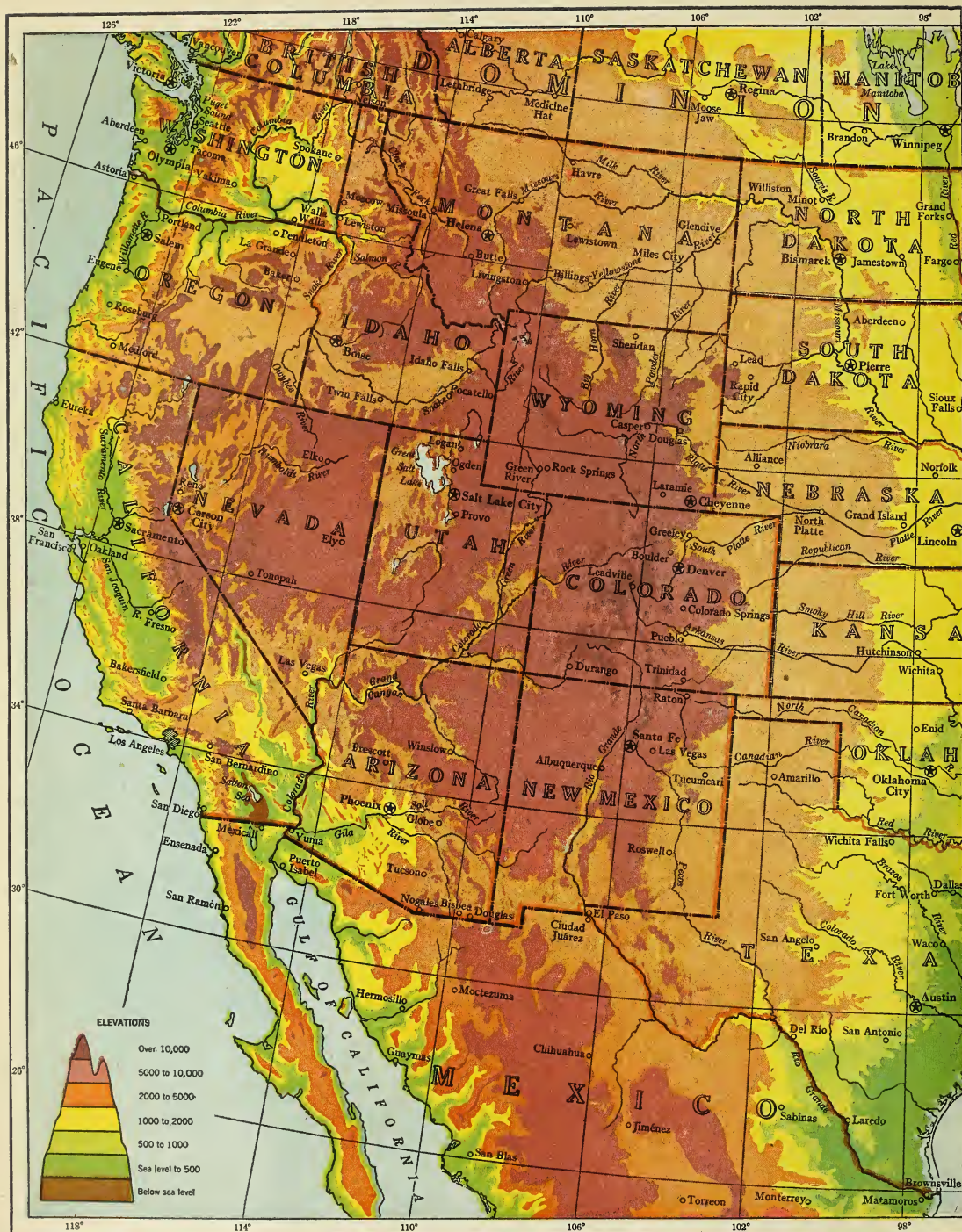


Fig. 20. Map of the United States. The stars show the capitals of the states.



Fig. 21. The mouth of the James River today. When the Jamestown colonists sailed past this place over 300 years ago, it was a dense forest. One of Powhatan's villages stood here.

THE CHESAPEAKE BAY REGION

THE STORY OF JAMESTOWN AND MARYLAND

JAMESTOWN AND JOHN SMITH

The coming of the English. Through Virginia flows a big, broad, beautiful river called the James. If we had sailed up that river three hundred years ago, we should have seen only forests along the banks, with Indian villages here and there and Indian warriors and squaws. The great chief Powhatan was ruler of all the tribes up and down the river, and many were his lodges. When Powhatan was dressed for a feast, with his mantle of bright yellow feathers and with strings of beads and shells around his neck, he looked very grand and fierce and strong.

One morning some Indians who were fishing and digging clams along the river bank near one of Powhatan's lodges down the river saw some strange-looking objects coming up the stream. They looked to them like big birds with great white wings. As they came

nearer, the Indians saw that the wings were fastened to what looked like big canoes. Men with pale faces pulled down the white wings, tied their queer-looking canoes to trees, and climbed out on the river bank.

It was a cold day in February, 1607, when this little band of men sailed from England in their three small vessels. Christopher Newport was in command of the ships, and Captain John Smith was one of the company. John Smith was an experienced soldier and used to hardship, for he had run away from home when he was a small boy, and had wandered and fought in many strange lands. He had returned to his home in England just as Captain Newport was getting ready to sail to America; so he had come along, probably in search of new adventures.

These men had been sent out by a company of merchants which was known as the London

Company. King James had given the company land in America and permission to settle there. The company had hoped that the colonists would raise crops, trade with the Indians, and find enough gold to pay the expenses of the colony, besides making a profit.

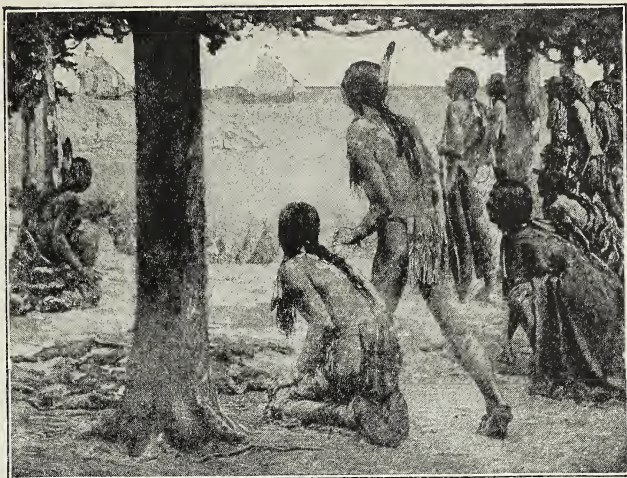
Most of the men were not fitted for settling a new country. Some were "gentlemen," as they called themselves, and had never been taught to work. Others were looking for adventure. Their only thought was to get rich quick with little work. They were not interested in growing crops, building cabins, or buying furs—they thought only of finding gold!

These men believed the stories they had heard: that the Indians cooked their food in pans of solid gold; that rubies and pearls hung from their ears; and that their children wore strings of rare jewels around their necks. "Surely," said these fine gentlemen, "it will not take us long to gather great fortunes in the new land." Therefore, when the colonists left England for America, they brought along plenty of picks and shovels for

digging gold. But, feeling sure that Raleigh's "lost colonists" had been killed by the Indians, they also armed themselves with a good supply of guns, powder, and bullets.

The founding of Jamestown. It was a bright day in April when the colonists sailed into the Chesapeake Bay. At the mouth of the Bay there were two capes, which they named Cape Henry and Cape Charles, in honor of the king's two sons. After lingering for a few days near Cape Henry, they sailed on into the Bay. Soon they came to the mouth of a great river. Up this river they sailed for about thirty miles, to a place where a little point of land jutted out. "Here we shall anchor," they said. "On this point of land we can see the savage Indians if they try to steal up to our camp. Let us call the stream the James River, and the settlement Jamestown, for our king."

The colonists had landed on a low, swampy peninsula; it was almost an island. Some of the men wanted to look for a higher place; but they finally agreed to stay there, since it was not far from the sea, easy to defend, and the water near the shore was deep enough for the ships. They did not know that, being



From the painting by G. A. Reid, Ontario College of Art
Fig. 22. "The Coming of the White Man"

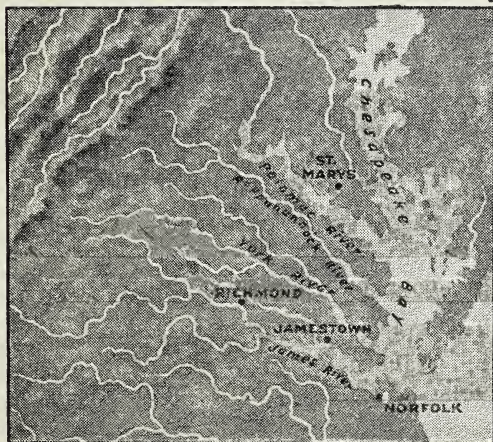
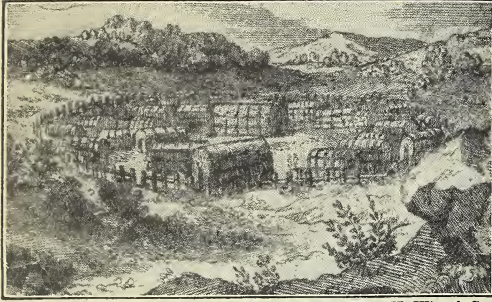


Fig. 23. The Chesapeake Bay settlements

low and swampy, it was the kind of place where people have chills and fever. Look at the map on page 29. Find Chesapeake Bay,



Courtesy Wm. H. Wise & Co.

Fig. 24. Powhatan's village

Capes Henry and Charles, and the James River. Now find them also on the big map (pages 16 and 17).

The colonists first built a few rough cabins and then a place for their preacher to hold church services. The pulpit was a board nailed between two trees, over which was stretched a sail from one of the ships. The Englishmen were tired of the salt pork and coarse meal that they had been eating on board the ships, and were glad to dig some oysters from the sandy shores and fry them over the coals. One of the "gentlemen" wished they had brought cows with them, and wondered whether the Indians had cows and horses. These men soon learned that the only tame animals the Indians had were dogs.

John Smith visits Powhatan. One day Captain John Smith, with a few other men, sailed up the James River to visit the great Powhatan. From the boat they watched the squaws digging holes in the ground with sticks and shells. In these holes they planted grains of yellow maize, or Indian corn. It was the first time the white men had seen corn, for this grain did not grow in England. Smith went ashore and greeted the squaws in a friendly manner. He offered them some beads, and showed them by signs that he wished to taste the grain. Then the squaws led the white men to Powhatan.

Before Powhatan would speak to the white men, he called in his warriors and held a "pow-wow." The Indians sat in a circle before their chief and, as the pipe was passed from one to another, each Indian would speak. After the Indians had finished their pow-wow, Powhatan gave Smith some corn, and the meat of wild turkey and of deer. The white men were glad to get these good things to eat, for their supplies had run low; their chief food had been porridge made from moldy barley and oatmeal.

When Smith returned to Jamestown, he found that the Indians had attacked the town while he was away and had killed one man and wounded several others. Smith said, "We must build a fort at once, for the Indians cannot be trusted."

Captain Newport now sailed back to England for more colonists and supplies, and Captain Smith was soon after made governor of the colony. Most of the men wasted their time hunting for gold. Smith told them that they had better find something to eat first.

Pocahontas saves Smith's life. The company in England had ordered Smith to search for the Northwest Passage. He began his trip by rowing up the Chickahominy River. Find that river on the map on page 24, and see whether you think Smith was likely to reach the Pacific Ocean by sailing up that stream.

Smith landed now and then so that he could see something of the country that lay back from the river banks. One day while doing this, he was captured by the Indians and taken to Opekankano, Powhatan's brother. The Indians wanted the white men to go away from the country and never return. So Opekankano asked Smith when they were going back home in their big canoes. Smith replied: "This is a fair land, and the hunting grounds are wide. We should like to have part of them." This made the Indians very angry, and they led him off to Powhatan. The old chief sat upon his blanket with his braves and squaws about him and received Smith

with much show. Among the squaws was Pocahontas, Powhatan's daughter. Although Smith felt that he was safe and that everything was all right, Powhatan had really made up his mind to get rid of him.

Some of the braves brought in two great stones, placed them before Powhatan, and laid Smith's head upon them to kill him. Just as the braves were ready to put Smith to death, Pocahontas threw her arms around his neck, laid her own head down on his, and asked for his life. Now, according to the rules of the tribe, an Indian princess might ask for the life of a captive when he was about to be put to death. Pocahontas was Powhatan's dearest daughter, and he could not refuse her; so he agreed to let Smith live. Powhatan called Smith to him and said: "You now belong to Pocahontas and are adopted into the tribe as my son. From this day my people are friends of the white men." Smith spent several weeks with the Indians.

Troubles of the colonists. When Captain Smith reached Jamestown, he found things going from bad to worse. The men still expected to find gold and would neither hunt nor build cabins. Food was scarce, and many of them were sick from living in such a swampy, unhealthful place. At last Smith said: "We must build more shelter for the winter, or we shall all freeze to death. Everyone must work. He who will not work shall not eat." So he taught the "gentlemen" to swing the ax and the hammer, and they soon built good log houses and a church.

Pocahontas visited the colonists again and again. They called her their "Dearest Jewel." She brought them good food and fine furs to keep them warm. But for many of them her help had come too late. About half of the colonists died before the winter began. This is how one of the colonists described their sufferings: "Our men were destroyed with cruel diseases, as swellings, flies, burning fevers, and by wars, but for the most part they died of mere famine."

Today, when men wish to explore the thick jungles at the equator, or the icy regions near the North or South poles, they can go in air-



Fig. 25. New colonists come to Jamestown.

planes. From their planes they are able to take pictures and draw maps of the country. If the first explorers in America could have made airplane flights, they would have discovered, very soon, that this was a great continent; that it stretched thousands of miles to the west before it touched the Pacific Ocean. They would also have discovered better places to make settlements. But they had no means of travel, except in canoes or on foot. So they could do no better than choose what seemed to them the best place—on the edge of the continent near the ocean, where ships could reach them easily.

In the spring the Indians taught the colonists how to plant corn and beans and where to find springs of pure water. More settlers came, and under the wise leadership of John Smith things became better. Exploring parties found what the country was like up and down the coast and inland, and even the "gentlemen" went to work planting crops. Captain Smith was careful always to keep friendly with the Indians.



Visual Education Service

Fig. 26. A field of tobacco plants

From Powhatan, Smith bought a piece of land about a hundred miles up the river from Jamestown, at a place where there were falls and rapids. Here he took some of the new colonists and made a settlement which he called None Such. Near the site of that little settlement grew Virginia's capital and largest city, Richmond (see Fig. 49, page 37).

In the spring of the second year Smith met with an accident in which he was so badly burned that he had to go back to England to have his wounds treated. When he said goodbye to Pocahontas, she promised him that she would watch over his colony, and that she would warn the white men if the Indians should become unfriendly. But now bad times came again. With their wise leader gone, the colonists fell into their old lazy, quarrelsome ways. They could not keep friendly with the Indians; and when winter came, sickness fell upon them again. In the spring only sixty out of five hundred were left alive. Then a new governor arrived with supplies and more settlers.

Pocahontas marries a colonist. Pocahontas soon grew to be a beautiful young woman, and John Rolfe, one of the colonists, fell in love with her and wished to marry her. Powhatan gave his consent; so they were married and sailed for England. Pocahontas was received at court as a real princess, the

daughter of an Indian king. Rolfe and Pocahontas were ready to sail back to Virginia with their son, Thomas, when Pocahontas became sick and died. Little Thomas lived with an uncle in England until he was grown. Then he came to America, married, and spent the rest of his life here.

Tobacco, the real gold of Virginia. All this time no settler was allowed to own as much as a foot of land in the new country. Each man was supposed to work for the good of the colony as a whole. The houses, food, tools, and all other things were owned by everyone in common. Some of the people were lazy and would not work. When the governor punished them, they became angry. Others worked hard and were angry when they did not get any land or any pay for their labor. And so hardly anyone was happy.

Then two things happened that changed the whole life of the colony. First, a wise governor gave each man a few acres of land for his own, and the right to buy more. Second, the colonists began to raise tobacco. The Virginia settlers had found the Indians raising this plant. It grew half as tall as a man and had broad, thick, green leaves (Fig. 26). The red men dried these leaves and smoked them in long-stemmed pipes. Spanish explorers had brought tobacco home from America. From Spain its use had spread to France and then to England.

Raleigh and some other Englishmen had learned to smoke. The habit had spread and the people of England were eager to buy tobacco. Because of this, the colonists were sure of a good business, and they planted many acres. Very soon tobacco could be seen growing in every possible spot—even in the streets of Jamestown. More and more people came from England, and the colony spread along the James River. Women came from England to join the colony, and men were able to marry and make homes.

The new land was well suited to raising tobacco. This part of Virginia had level stretches of rich soil such as the plant needed; and a long season of warm sunshine. Besides, there were many broad, slow-moving rivers, and the tobacco could be loaded on the boats right at or near the plantation and shipped across the sea.

Slaves are brought to America. So much tobacco was planted that there was not enough help to gather it before frost came. "Bring us laborers to do this hard work," the colonists said. So laborers were brought from England. Some of them did not want to come, but were forced with guns to go aboard the ships. When they arrived in Virginia, they were made to pay for their passage by working for the planters for a certain length of time. Others came because they wished to, and worked for the planters until they had paid for their passage.

In 1619 a Dutch ship came to Jamestown, bringing twenty-one negroes from the hot land of Africa. The white people bought them as laborers, for the Negroes were just the kind of help needed in the tobacco fields. During the next fifty years, more negroes were brought to Virginia. The planters made slaves of them, and of their children.

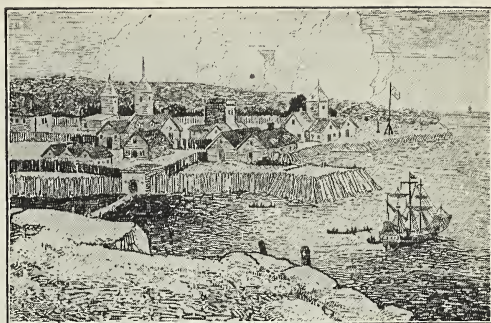


Fig. 27. The settlement at Jamestown, fifteen years after the colonists landed

Now that workers could be had, numbers of rich men came from England. They could get many acres of fertile Virginia soil for very little money; so they soon had far larger estates than many of the wealthiest men in England. Often a plantation had 5,000 acres in it, and the planters of Virginia had really become large land-owners.

What the settlers thought of their colony. In 1649 the Virginians advertised their colony in England as follows:

In Virginia there is nothing wanting to make people happy. There are now 15,000 white people with many Negro servants. There are plenty of cattle to furnish good butter and cheese. There are two hundred horses, besides sheep, goats, swine, and chickens. Then, too, there are many wild animals such as deer, raccoons, opossums, otters, beavers, and foxes. The wild turkey sometimes weighs sixty pounds. There are partridges, ducks, geese, and pigeons. All fruits and vegetables are now growing. But tobacco is our great crop.

The little advertisement said that tobacco was the "great crop" of Virginia; but it was more than that. It changed the life of the colonists in many ways. It was the reason for large numbers of slaves being brought to the colony. It made the planters rich. Because of the rivers, the rich soil, and the large areas of tobacco planted, the settlers lived on large plantations instead of in towns and villages. As new settlers needed land, the forests were cleared away farther and farther up and back from the rivers.



James Sawders

Fig. 28. All that remains of Jamestown. Ruins of a church built by the colonists



Courtesy Wm. H. Wise & Co.

Fig. 29. The Maryland colonists buying wigwams and land from the Indians

The Virginia colony had had a hard time during the forty years that had passed since the one hundred five gold-hunting men had tied their boats to the banks at Jamestown. Now the worst was over. Virginia was to be a great colony.

For many years Jamestown was the only town in Virginia and was the capital of the colony. Because it was located in an unhealthy place, it did not grow; and later the capital was moved to Williamsburg. Still later, Richmond became the capital. Today, the peninsula on which Jamestown stood is an island, and only a few ruins remain.

THE BEGINNINGS OF MARYLAND

Lord Baltimore's plans. About the time the Virginia colony was getting nicely started, the Catholics in England were very unhappy. Lord Baltimore, their leader, went to the king and asked him for land in America, to which he might take those who wished to leave England. The king gave him a grant of land north and east of the Potomac River (Fig. 30). The land of this new colony was to be named Maryland in honor of Queen Mary. Lord Baltimore died soon after the land had been given him, and his son, the second Lord Baltimore, carried out his father's plans.

In the winter of 1634 the colonists sailed from England in two ships, the *Ark* and the *Dove*, and found their way into Chesapeake Bay, just as Captain Newport had done twenty-seven years before. The *Ark* and the *Dove* carried plenty of good food, such as dried meat, fruit, and flour. The colonists had a good supply, also, of combs, bracelets, cheap rings, and beads—trinkets they knew the Indians liked—and knives, hatchets, and axes to trade for furs. The men brought guns, bullets, and gunpowder for hunting, and to protect themselves and their families from the Indians. The women brought kettles, frying pans, and other utensils for their homes in the New World.

The new colonists stopped at Jamestown to buy some cows, sheep, chickens, and fruit trees. Then they continued their journey up Chesapeake Bay and turned into the Potomac River. For several days they sailed up this river, looking for a good spot to settle—one that would be "healthful, fertile, and handy for trade, both with the English and the savages."

Founding of St. Marys. They found such a place on a little river that flows into the Potomac near its mouth. Here the colonists landed. They named their settlement and the

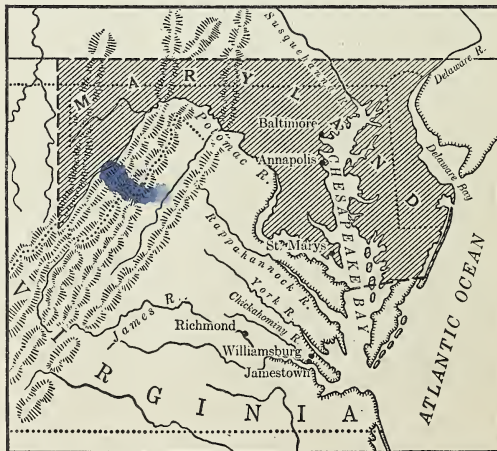


Fig. 30. The land given to the Maryland colonists

river St. Marys. From near-by Indians they bought a whole Indian village of wigwams and houses, besides a large tract of cleared land with corn already growing on it. All this they bought with a few hatchets and knives! Just think of it! The Indians had no iron and steel. They made all their tools and weapons of stone and bone; so these hatchets and knives were of great value to them.

The colonists went right to work planting gardens, and orchards of apple, cherry, pear, and plum trees. They found plenty of wild fowl and fish along the marshy shores and in the rivers; so they were sure of food. The colonists were glad to find some of the same song birds in Maryland that they had known in England. The bluebird and the cardinal were two of these; and they also found a new songster—one with a black and orange coat. This bird made a hanging nest like the oriole of England; so the colonists named it the Baltimore Oriole.

Freedom of religion. Maryland grew rapidly from the first. Lord Baltimore believed that everyone should be allowed to worship God in his own way. So men and women who were unhappy over religious matters in their own country flocked to the new colony. People of entirely different religions from England, France, Germany, and Holland lived side by side in this new colony in peace and friendship.

As the colony grew, it became more and more like Virginia. This was natural because the two were in one region and had the same kind of climate, soil, and rivers. But for three reasons the Maryland settlers were much better off than the Virginians had been when they first came: (1) The Marylanders found shelter in the wigwams and houses they had bought from the Indians. (2) They came early enough in the year to do spring planting. (3) They came to *work* and not to waste their time looking for gold.

Annapolis was founded by Protestants. So many of them came that Lord Baltimore gave them a whole county to themselves. A hundred years and more after St. Marys was settled, the people saw they must have a



Courtesy Maryland Historical Society

Fig. 31. Baltimore in the early days. Now look at Fig. 48.

better harbor for ships. So, after looking over the whole shore, they chose a place at the mouth of a river that flows into the bay. This river was the Patapsco, and here the city of Baltimore was started. Today, nothing is left of the settlement at St. Marys.

QUESTIONS TO ANSWER

1. Name the rivers that flow into Chesapeake Bay. Which one is the largest? 2. What did the white men expect to do in this country? What was the real gold of Virginia? 3. Why should the colonists have chills and fever, or malaria?

4. Why did Smith stop at None Such when he went up the river to locate his settlement? 5. Why did tobacco grow so well in Virginia? 6. Is Jamestown a large city today? 7. Did the settlers of Maryland come for the same reason as the Virginians? 8. What whole state now takes up part of the land given to Lord Baltimore? (Study the map on page 24 and the one on page 29.)

THINGS TO DO

1. On an outline map of the Chesapeake Bay region show: Chesapeake Bay; the James, York, Chickahominy, Potomac, and Rappahannock rivers; the states in this region and those that bound the region; Jamestown, Williamsburg, and Richmond. 2. Try to draw a picture of Powhatan's village; also a picture of a tobacco field. 3. Ask your teacher to help you make a play of the story of the settling of Virginia and Maryland, and act it for the school.



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Fig. 32. Dancing the Virginia Reel on the lawn of a plantation home

LIFE ON THE PLANTATION

You have learned how the first colonists suffered from lack of food, from sickness, and from troubles with the Indians. And even after these troubles had passed, there were years of hard work, for they were settling a new land. But as time went on, the people began to have more and more of the pleasant things of life, for they had more money and did not have to work so hard. The little farms cut out of the forest grew into great plantations of thousands of acres. Log houses were replaced by fine mansions. The owners of the plantations lived most comfortable and happy lives, with slaves to do all of the work.

Plantation buildings. Because the plantations were very large, neighbors lived far apart; usually from two to three miles. One could see the buildings best from the river, for the rivers were the highways. Each

plantation had its own wharf, where the ships from England unloaded the clothing, furniture, tools, and provisions the planter needed to buy. From the same wharf the ship loaded great barrels of tobacco to be taken across the sea.

Back from the wharf and across a wide lawn was the planter's home, facing the river. The plantation was like a little village. The owner, or squire, lived in the mansion, or "Big House," as the slaves always called it. At the back of the Big House on one side was the kitchen with its huge fireplace, where all the cooking was done. Next to the kitchen was the meat house, where the salted and smoked meat was kept. On the other side were small houses or cabins for the Negro slaves, known as the "quarters."

Beyond the Negro quarters were the stables for the planter's fine horses; some for hunting, racing, and visiting, and others for work-

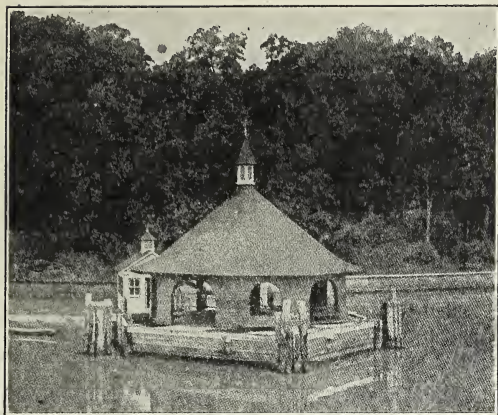


Fig. 33. A river wharf of plantation days

ing in the fields. Close by were the blacksmith shops, where the horses and mules were shod and the farm tools kept in repair; the cobbler's shop, where the shoes for the family and all the servants were made; and long sheds where the tobacco was dried.

There was always a large garden where the vegetables for the family and servants were grown. A part of the garden was always planted in choice flowers, and sometimes there was a greenhouse so that flowers could be grown in winter. Beyond the buildings and the garden stretched broad fields of tobacco, corn, and wheat, and pastures for cattle, horses, mules, and sheep.

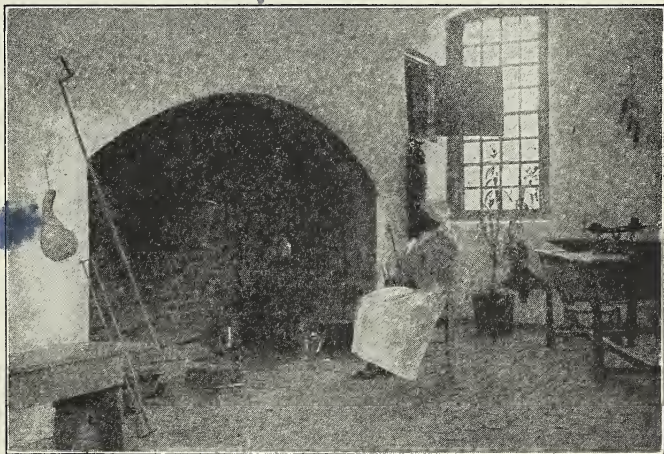
Social life on the plantations. The social life in a planter's home was pleasant. The door of the mansion and the hearts of the family were always open wide to all who might come. Guests were welcome. Whether they were strangers or friends, or whether they came from across the sea or from the next plantation, they were expected to stay as long as they pleased—a day, a week, or a month.

There were no newspapers, and visitors, especially from England, always brought interesting news.

The clothes for the squire and his family came from England, and were rich and handsome. When the squire was dressed in his Sunday best, with long coat, knee breeches, silk stockings, lace collar and cuffs, and a big powdered wig, he was a fine-looking gentleman.

The one great event of the year was the governor's ball. The planters with their wives and young people came to the capital from far and near. They came by boat, in coach-and-four, and on horseback. Sometimes the planter and his wife rode on the same horse—the wife behind her husband on an extra seat called a pillion. The coach might have trouble getting through because there were few roads, and they were so poorly kept that they were often knee deep in mud. It was so much easier to travel on the rivers than it was to build good roads.

Churches and schools. Where the people lived too far apart to have a church, a room in the mansion was set aside for services. On the Sunday mornings when the minister came, the family and the servants were gathered together in this room to listen to the



James Sawders

Fig. 34. The fireplace in a Virginia plantation home



From the painting by Wordsworth Thompson. Courtesy Metropolitan Museum of Art
 Fig. 35. Church time was also visiting time for the colonists, who were glad of the opportunity to meet friends from distant plantations.

services. When the minister did not come, the squire held the services and read the Bible.

For many years there were no schools for the children. The plantations were so large that homes were far apart, and of course there were no auto busses and street-cars to carry the children to school. So the children were taught by the minister or by a private teacher, called a tutor, until they were twelve or fourteen years of age. Then the boys were sent to England to attend college. The girls were kept at home, for in those days it was not thought necessary to educate girls. In 1693 the Virginians founded William and Mary College at Williamsburg, the oldest college in the South. It was named for the king and queen of England.

Government. You may wonder who ruled the people of this region. In Virginia the London Company sent the governor and appointed a council. In Maryland the king gave the land to Lord Baltimore, who was called the proprietor. He selected a governor. Each colony had a charter, which listed the rights of the people.

We all know that a government must have

rules, or laws. In each colony the voters elected men to meet with their governor and make laws. In Virginia these men were called burgesses, and the assembly was called the House of Burgesses.

QUESTIONS TO ANSWER

1. What took the place of good roads in Virginia and Maryland? 2. How did people travel when they did not use the rivers? 3. Tell about the schools of colonial days in Virginia. 4. How were the laws made? Why do we need laws in our towns, cities, and nation?

THINGS TO DO

1. Draw a plantation plan showing river landing, houses, crops, and woodland. 2. Would you not like to play plantation life—dress up in the old style and have company? Try it. 3. Learn the songs, "Carry Me Back to Old Virginny" and "Maryland, My Maryland."

Books to read: Bailey, *Boys and Girls of Discovery Days*, pp. 147-159; Evans, *America First*, pp. 27-39; Logie, *From Columbus to Lincoln*, pp. 18-39; Mace-Petrie, *Elementary History*, pp. 48-54; Nida, *Following Columbus*, pp. 158-179; Otis, *Richard of Jamestown*, *Calvert of Maryland*; Southworth, *Builders of Our Country, Book I*, pp. 73-88.

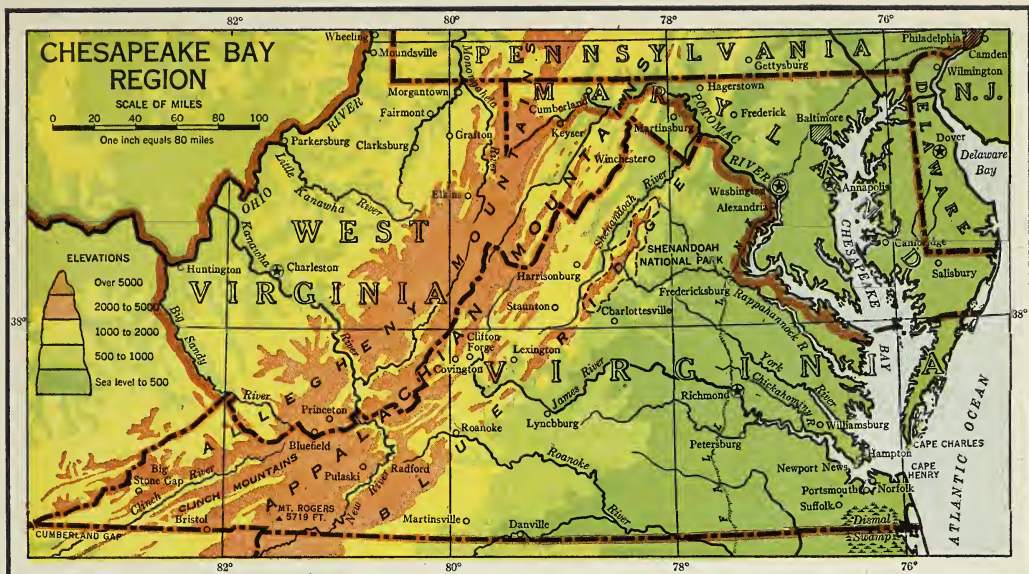


Fig. 36. Map of the Chesapeake Bay region and West Virginia. For many years the state of West Virginia was part of Virginia.

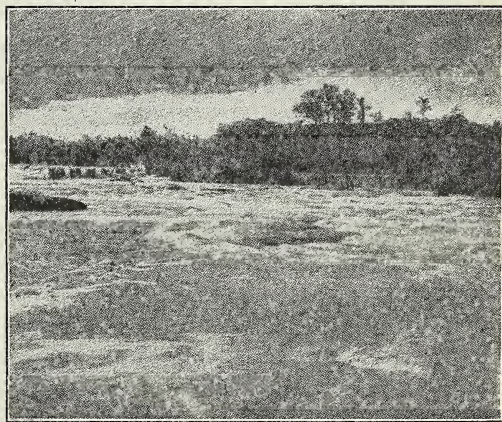
THE CHESAPEAKE BAY REGION TODAY

THE ATLANTIC COASTAL PLAIN

If Captain John Smith could come back today to the section where he once lived and explored, do you suppose that he would feel at home? Probably he would be so amazed at the many changes that he would scarcely believe it to be the same country he once knew. Before starting out on an exploring trip over the state, Captain Smith might like to look at an up-to-date map giving Virginia's present boundary line. Trace the boundary on the map. What river forms part of the boundary on the north? In Smith's day Virginia was made up of a little land along the James.

In the same length of time he had taken to paddle from Jamestown to None Such he could now travel over a large part of Virginia and Maryland. He would learn that the settlements at Jamestown and St. Marys were in a region now called the Coastal Plain, because it is low, nearly level, and along the coast. He knew that about 100 miles inland the land

began to rise, for he had seen the rapids in the river near None Such, where the water came rushing down from the higher land to the low land of the Coastal Plain. This higher, hilly land back of the Coastal Plain



Courtesy Wm. H. Wise & Co.

Fig. 37. Rapids in the James River near Richmond, where the water rushes down from the Piedmont to the lowlands of the Coastal Plain



Fig. 38. Fruit and vegetables raised on the Coastal Plain of Maryland, Virginia, and Delaware

we now call the Piedmont. The word Piedmont means "foot of the mountain." West of the Piedmont lie the mountains. Turn to the relief map (facing page 1) and locate the three divisions—Coastal Plain, Piedmont, and mountains. On the colored map (pages 16 and 17) locate the Chesapeake Bay region.

How the Coastal Plain was made. You might like to know how this low, flat Coastal Plain was made. A long, long time ago—thousands and thousands of years—what is now the Coastal Plain was away down under the sea. During all those thousands of years, the rains washed dirt off the mountains into the rivers, and the rivers carried the clay, sand, and mud down and dumped them on the sea bottom. Then something happened inside the earth, and this sea bottom began slowly to be lifted up. It kept rising for many years, until all this Coastal Plain was pushed several feet above the level of the sea.

The rivers cut their channels through the soft dirt to get to the sea. You have seen something like that after a heavy rain. And then again something happened, and this plain settled down a few feet. This made the rivers so nearly level with the sea that the sea water came up the streams for a long way. For this reason these rivers are called "tidewater" rivers, and this part of Virginia and Maryland is known as the "tidewater" country. It was on the rich sandy soil along these rivers that the first Virginians and Marylanders made their settlements and

raised tobacco. Even today much of the produce leaves the farms in small boats (Figs. 38 and 39). If Captain John Smith should start from any point on the Atlantic coast from New York to Florida and travel west, he would find the same Coastal Plain, except that the farther south he started the wider he would find it. Prove this on the land relief map (facing page 1).

The Coastal Plain—a great garden. In the early days of Virginia and Maryland each farm and plantation grew nearly all of the foods that were needed for the use of the owners. As towns and cities sprang up and grew in number and size, the people in them became busy in manufacturing, buying, and selling. They no longer had time to raise their own food; so they bought it from the farmers near by. Vegetables and berries soon became the big crops of the Coastal Plain of Virginia, Maryland, and Delaware.

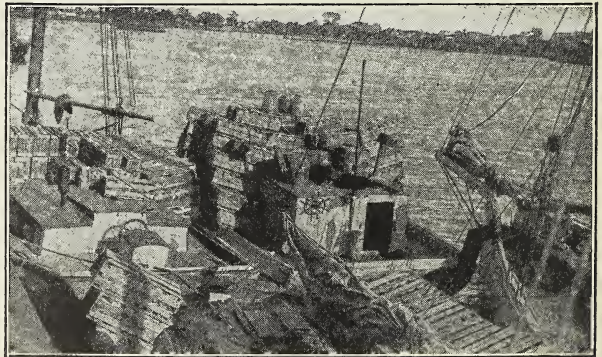


Fig. 39. Boats waiting to unload their fruit and vegetables at Norfolk. These small boats come from farms many miles up the rivers that flow into Chesapeake Bay.

U. S. Department of Agriculture

Our cities have grown so large, and there are so many of them, that they need a large supply of food all the time. Vegetables and fruits must be fresh when they reach the cities. Railroads and trucks carry goods quickly, and people in northern cities can get fresh vegetables while the snow and ice still cover the near-by farms. On the railroad map (page 374) find a railroad running from Baltimore to New York.

Since the Chesapeake Bay region has a warm, rich soil, it has become a big garden. It is called the "in between" country, because in the winter and spring Florida and the Carolinas send vegetables to market earlier than this section, and New Jersey sends them later. Should you visit Portsmouth, Virginia, about the middle of May, you would find these farmers shipping their third crop of lettuce and their



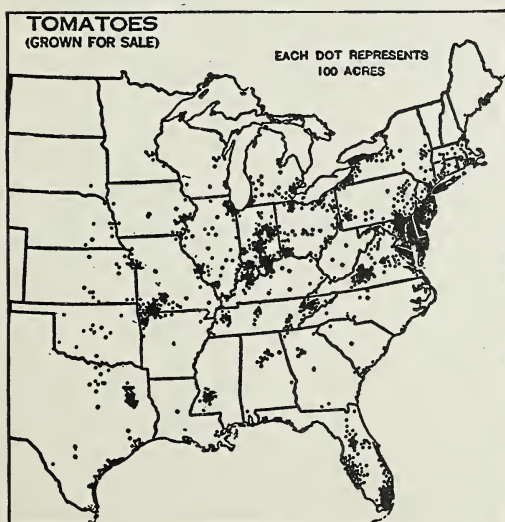
U. S. Department of Agriculture

Fig. 40. Loads of peas still on the vines being brought to a canning factory at Seaford, Delaware

main crops of peas, cabbage, asparagus, and strawberries. Later they ship Irish potatoes, sweet potatoes, and other root crops. Melons, peaches, and berries are shipped a little later in the season. Annapolis and the Maryland-Virginia-Delaware peninsula between the Chesapeake and Delaware bays are shipping their garden stuff just a little later. Sweet corn has been on the market, and tomatoes are coming in. Maryland is one of the greatest tomato-growing states (Fig. 41).

Peanuts. Tobacco was the "great crop" of early Tidewater Virginia, and it is still the leading crop of the state; but another crop for which Tidewater Virginia is noted today is the peanut. This plant came from South America. It was imported at about the time the first slaves were brought from Africa. Peanuts grow well in a warm, sandy region; so they find a pleasant home in the Coastal Plain of Virginia. Study the peanut-growing map (Fig. 43) and name three other important peanut states. You may use the map (pages 16 and 17) to find the state names.

The peanuts are planted in rows about three feet apart. The plants grow from one to two feet high and have pretty yellow blossoms. When the blossoms fall off, the flower stalks bend down and push their heads into



U. S. Department of Agriculture

Fig. 41. Notice how black the map is around Chesapeake and Delaware bays. Great quantities of tomatoes are also grown in California.



U. S. Department of Agriculture

Fig. 42. Stacking peanut vines for drying

the ground. As soon as these little heads are snug and warm in their underground beds, they begin to grow the nuts we like so well. When the nuts are ripe, the plants are plowed loose, pulled, and stacked to dry. A threshing machine separates the nuts from the vines. They are then dried and put in sacks for shipment. Norfolk is a peanut-shipping port.

Oyster farms. Oysters are found in many places along the eastern and southern coast, from Maine to the southern point of Texas. But most of them come from the shores of Maryland and Virginia. The Chesapeake Bay region produces several million bushels a year—far more than are produced in any other part of the country. You can understand, then, why the gathering and packing of oysters is one of the chief industries of this section of our country.

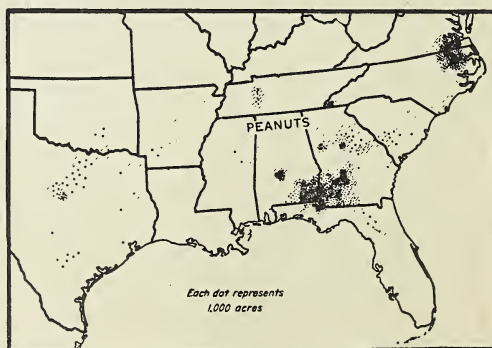
And now let us learn something of the life of the oyster. First of all, it finds its home at the bottom of a bay or inlet of salt water, where the tide is gentle. In order to grow, this small shellfish has to remain in

the same place, and motionless, all its life. A strong tide would wash it away. Second, the sea floor must be hard enough for the oyster to cling to and not be buried in the mud. The best kind of floor for the oyster is one either of firm mud or of soft mud covered with gravel or shells.

For years enough oysters grew naturally in the Chesapeake Bay region to supply the market. But after a while there was a demand for many more than the fishermen could find. Then companies were formed to manage "farms," so that the young oysters could be planted and protected until they were large enough to be eaten.

You may be wondering how the oyster is planted. It is a very simple matter. If the planter cannot find a mud floor that is firm enough for the oyster to fasten itself to, he makes one by covering the soft mud with sand, gravel, or shells. Then he plants the seed—young oysters that have been hatched. They are shoveled from boats and make their way to the undersea farms.

How an oyster grows. After the young oyster is hatched, it enjoys six or seven days of freedom. It then gives up its freedom and swims to the bottom of the water. There it fastens itself to another oyster, a shell, a stone, or some firm mud, just as oysters have done for thousands of years. When the oyster is once fast, it loses its power to swim



U. S. Department of Agriculture

Fig. 43. Where peanuts are grown.

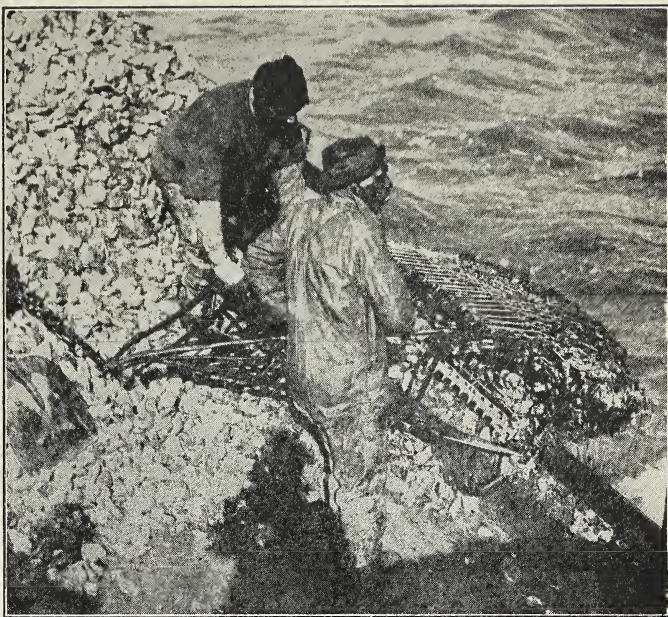
and is never able to move away from the spot again.

In a short time the little fellow grows to the size of a grain of sand and begins to form a shell which is to be its future home. The shell has two hinged halves, or valves, which the oyster can open or close at will. The oyster has no head and no eyes, but it has a great big mouth and big lips. Through these lips it sucks in very tiny particles of fish and plant life. Although the oyster can neither hear, see, nor smell, it knows enough to close its shell when an enemy comes near. So tightly can the oyster close its shell, that great strength is required to force it open.

Gathering and packing. From September to April the fishermen go out to the farms in boats taking with them long-handled, long-toothed tongs. The tongs are thrust down into the oyster beds, and the teeth tear the oysters loose. As the teeth are forced together with the oysters in them, like big shears, a kind of basket is formed, by which the oysters are lifted. Great shovels are used in some oyster beds; and where the water is very deep, sometimes the oysters have to be brought up by steam dredges (Fig. 44).

At the dock the oysters are taken to the packing houses to be shucked, that is, removed from the shells. When the shucking is finished, the oysters are spread out on tables and washed in salt water. Then they are run into large tanks, from which they are packed in cans or tubs, placed on ice, and shipped away in refrigerator cars.

You may wonder what becomes of the millions of oyster shells that are left from the oysters that are shucked. Some are taken



Courtesy Virginia State Chamber of Commerce
Fig. 44. An oyster dredge at work. You can see the big, basket-like wire dredge being pulled up full of oysters.

back and dumped on the oyster beds, so that the baby oysters may have something to which to fasten themselves. Some are ground up to make fertilizer, or plant food, to be used on farm land. Sometimes they are crushed and used for making roads.

Seaports. The ships that cross the ocean today are so many, many times larger than those of the old days that they cannot go up the rivers and stop at each plantation wharf as they once did. They would find few places wide enough for them to turn around; and, besides, it would take too long to gather a load. Cities have grown up near the coast, where the ocean steamers may anchor and load the produce brought from the plantations by smaller boats and by the railroads (Fig. 45). Norfolk, Newport News, Annapolis, and Baltimore are such seaports. Annapolis is the capital of Maryland, and is famous because the United States Naval Academy is located there. At this school Uncle Sam trains the young men who are to be officers in

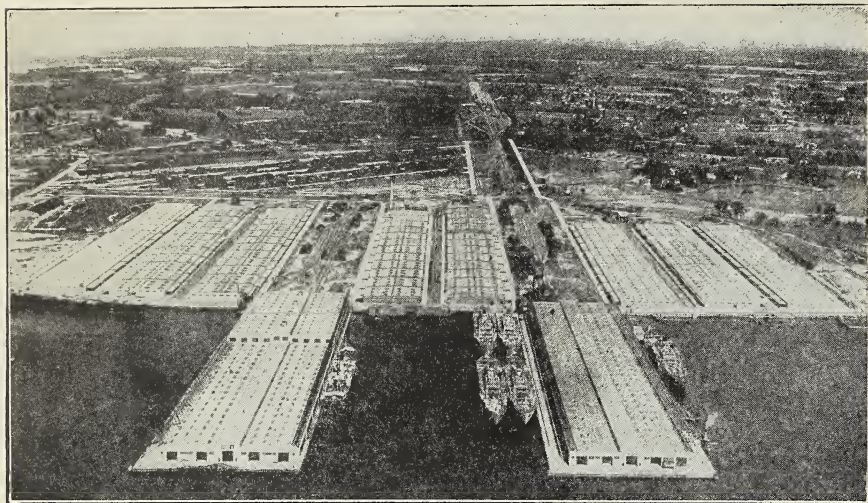
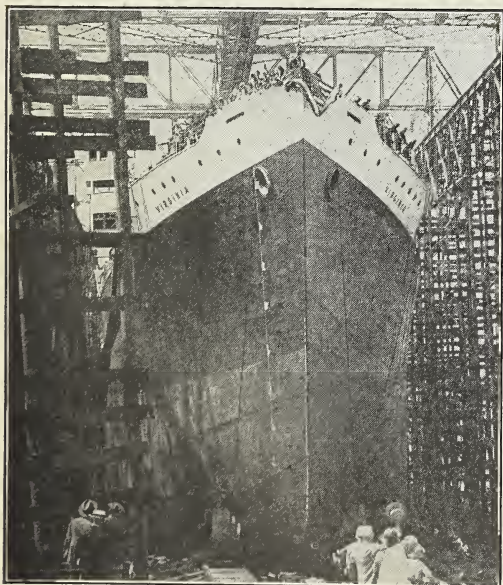


Fig. 45. Docks at Norfolk for shipping fruit, vegetables, tobacco, peanuts, and other products. Notice how the flat Coastal Plain stretches away as far as you can see.

the United States Navy. At Newport News there are great ship-building yards and dry-docks for repairing ships. The mouth of Chesapeake Bay, you see, is a great ocean doorway to our country. Study it on the map.



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Fig. 46. In the shipyards at Newport News. A great ocean steamship ready to be launched

QUESTIONS TO ANSWER

1. Into what three parts is this region divided? Where did the dirt come from to make the Coastal Plain?
2. What are the principal crops of the Coastal Plain?
3. What effect would it have on the price of tomatoes in New York if they were ready to gather at the same time in New York and in the Chesapeake Bay region?
4. What food comes from Chesapeake Bay? What business, then, is found in Baltimore and Annapolis?
5. Tell the story of oyster growing.
6. How does the peanut differ from the potato in the way it grows?
7. In what ways do we use the peanut?

THE FALL LINE AND THE PIEDMONT

The Fall Line. The sea marks the eastern edge of the low, flat Coastal Plain; and the hilly, rolling Piedmont plateau, or highland, marks the western edge. A deep well can be dug in the lowlands without striking rock, but the rock is only a few feet under the soil in the Piedmont. In fact, it comes to the surface in many hilly places.

We find a line of falls and rapids in the rivers all along where the plain, or lowlands, and the Piedmont meet—the Fall Line, it is called. The streams do not wear down the



James Sawders

Fig. 47. The Blue Ridge Mountains. The beautiful Shenandoah Valley lies below.

rocky soil of the Piedmont very quickly; but when they strike the soft earth of the plain, they easily cut deeper channels. They fall or flow swiftly from the high Piedmont to the lower plain. Towns and cities are found along the Fall Line, because all boats going up the rivers must stop there on account of the falls and rapids. Now do you see why cities started and grew there? Baltimore and Richmond are industrial centers among the fall-line cities in this region. Locate these cities on the map on page 29. Then turn to the map on page 112 and find other fall-line cities in the states south of Virginia.

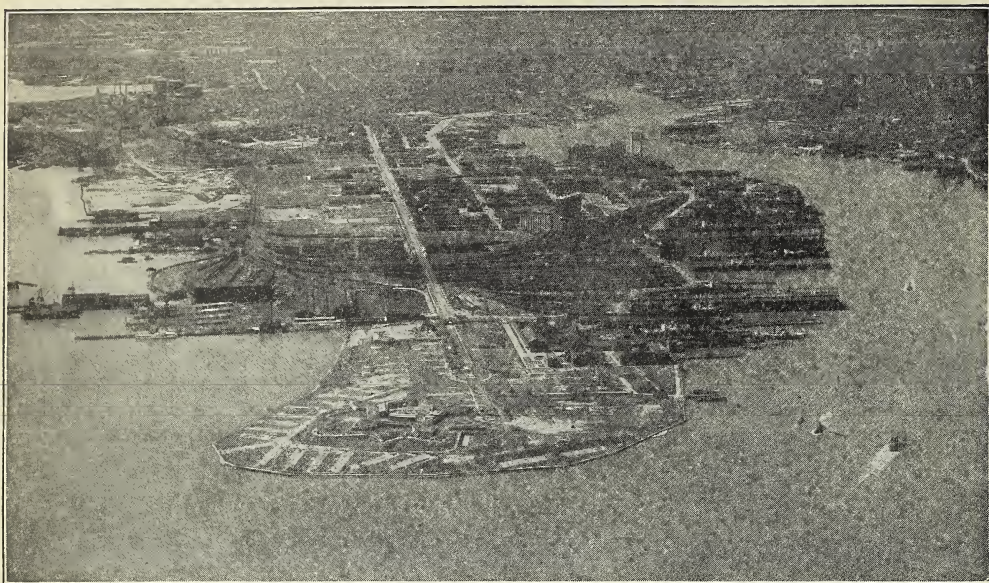
Farming in the Piedmont. The Piedmont is a region of mixed farming; much wheat, corn, and hay are grown. This is the largest dairy region of the South because of the fine pastures and the clear pure water of the streams and springs. The finest of horses and mules are raised here, and many army officers come to this section every year to buy them for the army. Everywhere one sees big red barns filled with hay and grain for the cattle and horses, or the stock, as we call them.

Wonderful pear, peach, cherry, and apple orchards dot the hillsides. Apples have been

grown here for many years. It is said that our Minister to England once gave some Albemarle Pippin apples to Queen Victoria, who liked them so well that she always used them after that. Apples are still shipped from this section to England.

The great tobacco-growing section is in the Piedmont of Virginia and northern Carolina. Tobacco was pushed out of the garden of the Coastal Plain—it just didn't fit in. You see, garden products grow well in the plain, and as cities grew up in this region, there was great need of these garden products. There they are handy to the railroads to be shipped quickly to the markets; for they must be shipped fresh, as you know. Then, too, tobacco takes the richness out of the soil very quickly. Since the tobacco growers of early Virginia did not fertilize their land, they had to keep moving to new fields as the old land wore out.

Fall-line cities. You can see that the fall-line cities are the largest and most important of the Piedmont. Baltimore is the largest in this region, and is seventh in size in the United States. It has a good harbor on the Chesapeake Bay, where the Coastal Plain and



Courtesy Baltimore Chamber of Commerce

Fig. 48. Baltimore's fine harbor. You remember that the colonists left their first settlement at St. Marys and founded Baltimore because they needed a better harbor.

the Piedmont meet. Maryland is an important state in the canning industry. Many of this state's canneries are in Baltimore, which also has large fertilizer factories, iron works, lumber yards, and shipyards. It is the center for the goods needed by the farmers and fishermen in the smaller towns down the bay and in the country round about.

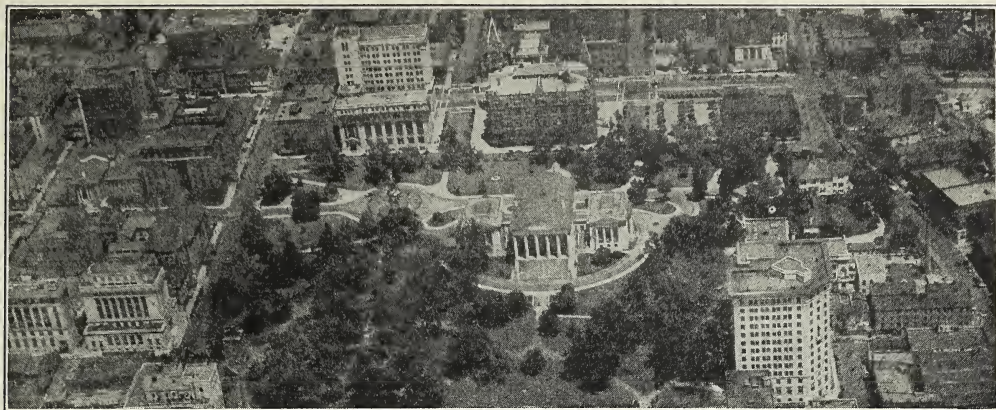
Hundreds of different articles are made in Baltimore: one-fifth of the copper goods of the world, tin cans by the million, millions of straw hats, and clothes for all the family. Baltimore packs more spices than any city.

Ship-building was, even in early days, very important in Baltimore. In its shipyards were built the fast sailing vessels known as the clipper ships. These became famous all over the world for their beauty and speed. They were used in trade with places as far away as China and Japan. Today steel ships are made in the same shipyards that built the clipper ships. The first steamer to cross the Atlantic Ocean sailed from Baltimore. A dozen steamship lines and several railroads

carry away Baltimore's products. The leading railroads are the Baltimore and Ohio, the Chesapeake and Ohio, and the Pennsylvania. Baltimore also ships grain, clothing, coal, tobacco, canned fruits, vegetables, and oysters to countries across the ocean.

Richmond with its many tobacco factories is a leading tobacco market and the home of important paper factories and machine shops. It is the capital of Virginia. Lynchburg and Danville both take care of the tobacco grown near by. Frederick, Maryland, and Charlottesville, Virginia, are important small cities of the Piedmont. Rayon is made in Cumberland, Maryland, and Roanoke, Virginia.

The Blue Ridge and "The Valley." Looking westward from Lynchburg, you see a ridge of mountains that look blue in the distance. They are named the Blue Ridge Mountains. They are just one part of the great Appalachian Mountains that extend all the way from Pennsylvania to Alabama. Even though they look so blue, they are covered with heavy forests of bright green trees. From a dis-



Courtesy Richmond Chamber of Commerce

Fig. 49. A view of Richmond, Virginia's capital city, which grew near the site of John Smith's little settlement at the falls in the river. In the center of the picture is the state capitol building.

tance, too, it looks as though these mountains form a solid wall; but they are not so solid as they look. If you should follow the James River west, you would find that it has cut a gorge right through these mountains.

You may climb to the top of one of the mountains in the Blue Ridge and look down upon a rich and beautiful valley—the Shenandoah Valley, or “The Valley,” as it is called by the people there. This valley is the widest, most fertile, and most famous part of the Appalachian, or Great Valley, that extends from New York to Alabama. If you look still farther westward, thirty to forty miles, you see the famous Allegheny Mountains, part of the great Appalachian Highlands.

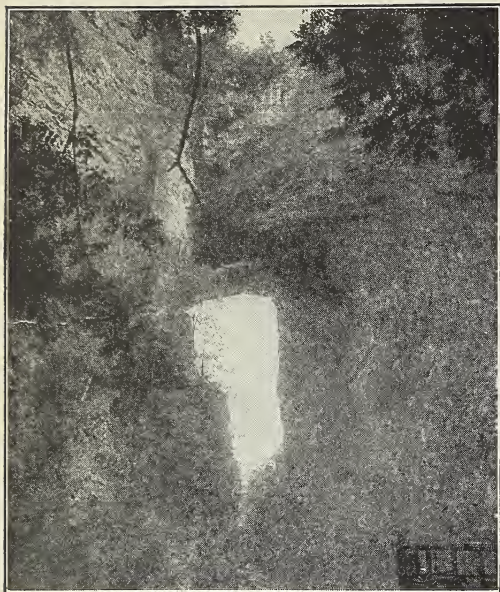
The Valley is very much like the Piedmont, but the soil is richer. Fine horses are raised here, too, and dairy farms dot the country. The farm products of the Valley are much the same as those of the Piedmont—corn, wheat, hay, and fruit, especially apples. There are no large cities in the Valley, but Hagerstown, Winchester, Staunton, Roanoke, and Bristol are prosperous farming centers.

Do not fail to visit Virginia's Natural Bridge when you visit the Valley (Fig. 51). It is called “natural” because it was made by nature. Luray Cavern, a great cave with rooms and hallways of beautiful crystal, is another interesting place in the Valley.



Fig. 50. A field of growing tobacco in the Piedmont region

James Sawders



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Fig. 51. Natural Bridge in the Shenandoah Valley. A stream of water has cut under the rock and left a bridge 100 feet wide and 215 feet high.

QUESTIONS TO ANSWER

1. What is the great difference between the Coastal Plain and the Piedmont? 2. Why is the Fall Line so called? 3. Why should cities have grown up at the Fall Line? 4. What are the principal crops of the Piedmont? Just why is tobacco

now grown in the southern part of the Piedmont, instead of on the Coastal Plain?

5. Locate the Blue Ridge Mountains. Mention two rivers that cut through them. 6. Since horses, mules, and dairy cows are raised in the Shenandoah Valley and the Piedmont, what do you expect to find growing in the fields? 7. How do the colors on the map show you that this is a valley?

THINGS TO DO

1. On the outline map write, in the places where they are raised, the names of the following products: tomatoes, strawberries, corn, tobacco, horses, dairy products, oysters, and apples. Write also the cities mentioned in this book. 2. How does it happen that Norfolk, Portsmouth, Newport News, Baltimore, and Annapolis are just where they are?

3. Turn to the table of South Atlantic cities (page 469), and notice what each city of Virginia, Maryland, and Delaware manufactures and has to sell. 4. Draw lines from Baltimore and from Norfolk out into the Atlantic Ocean, and draw on these lines the cargoes you would expect to find on ships going to other countries and to New England.

Books to read: Allen, *Geographical and Industrial Studies, United States*, pp. 305-308; Carpenter, *North America*, pp. 55-60, 132-138; Carpenter, *The Foods We Eat*, pp. 80-97, 128-131; Lefferts, *Our Own United States*, pp. 78-83; Pitkin and Hughes, *Seeing America—Farm and Field*, pp. 101-126; Southworth and Kramer, *Great Cities of the United States*, pp. 173-188.

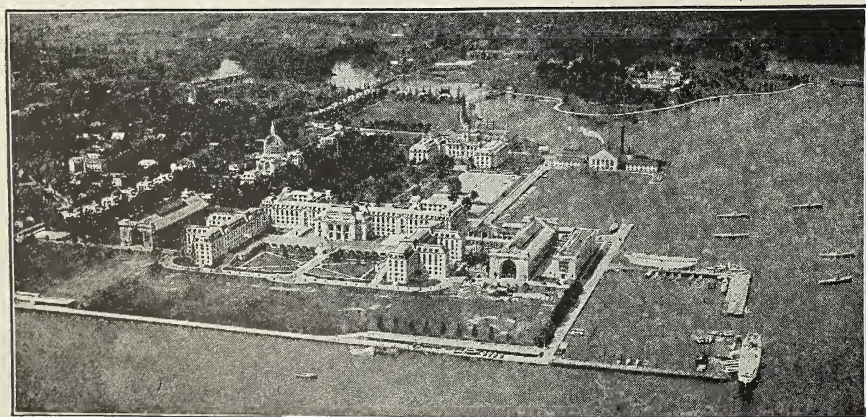
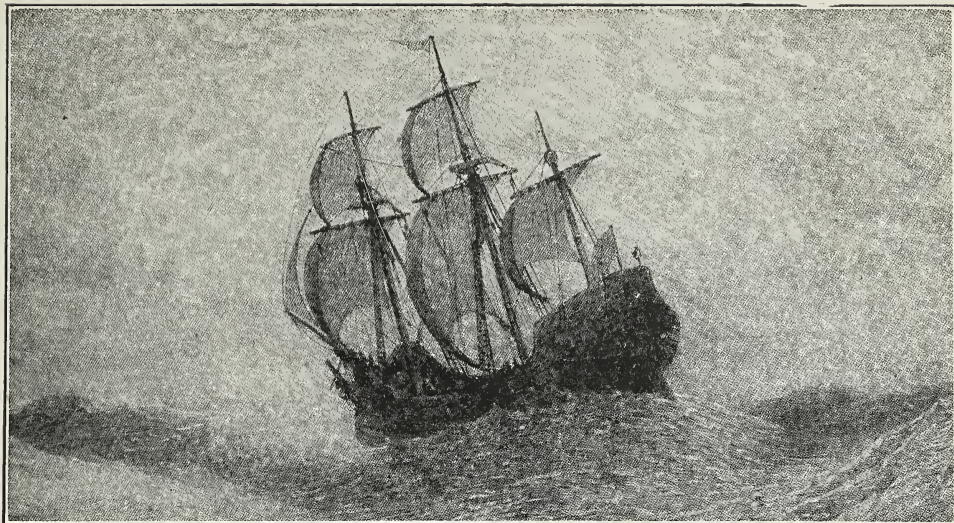


Fig. 52. The United States Naval Academy at Annapolis.



Courtesy Wm. H. Wise Co.

Fig. 53. Across the stormy North Atlantic the little Mayflower carried the first New England settlers.

THE NEW ENGLAND REGION

THE PILGRIMS AND THE PURITANS

THE COMING OF THE MAYFLOWER

Why the Pilgrims came to America. Some of you attend the Methodist church, some the Baptist, some the Lutheran, some the Catholic, or any other church you please. Neither the President of the United States, the governor of your state, the mayor of your city, nor any other officer tries to tell you how you shall worship God. It was not that way in England 300 years ago. The king expected everyone to attend the Church of England, of which he was the head.

Some of the people did not like the service in the king's church. They tried to change, or, as they said, purify the service; therefore they were called Puritans. The king did not like this; so he ordered all the churches in the country to use the same service and not to change it. Then some of the Puritans left, or separated from, the church; they were called Separatists. They began to hold meet-

ings in their homes. Whenever the king's officers caught the Separatists holding meetings, the Separatists were persecuted.

The Separatists now saw that there was only one thing for them to do: they must leave their native land. Then they were called Pilgrims, because they were wanderers. A number of these Pilgrims went to Holland to live, where they were welcome. But, of course, when their children went to the Dutch schools, they learned the Dutch language and customs. The Pilgrims did not like this, for they loved England and did not want their children to forget the homeland. Furthermore, it was hard to earn a living in Holland, and there was danger of war between Holland and Spain. They had heard of the new land, America, where they could buy all the land they wanted, have their own schools, and worship as they pleased. They decided to come to this new land.



Visual Education Service

Fig. 54. A few days before Christmas the Pilgrims landed at Plymouth.

The Pilgrims set sail. The Pilgrim leaders returned to England and asked the king for permission to settle in America. The king thought it was a good way to get rid of the Pilgrims, and the Virginia Company, as the London Company was now called, gave them permission to settle just north of Jamestown. In 1620, thirteen years after the settling of Jamestown, 102 Pilgrims set sail from Plymouth, England, in their little ship, the *Mayflower*. John Carver and William Bradford were the leaders, and Captain Miles Standish was in charge of the soldiers.

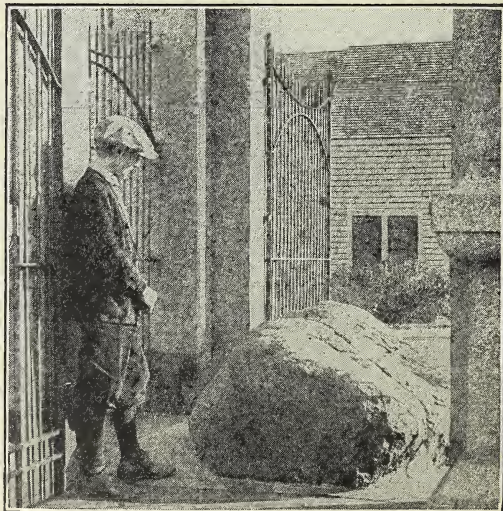
When the *Mayflower* was well out to sea, a great storm came up which nearly wrecked the ship. It sprang a leak, but the little band kept right on. They had planned to land in Virginia, but hard winds blew them farther and farther north, until they finally sailed into what we now call Cape Cod Bay. They thanked God that they had reached land safely. The *Mayflower* was so badly in need of repairs, and the Pilgrims were so tired from their long journey, that they decided to land here instead of going on down the coast to Virginia. Look at the map of New England (page 54) and find Cape Cod Bay.

The section of the country where the Pil-

grims landed is known today as New England. But it was not the Pilgrims who first saw this land or named it. In 1614 John Smith, the famous captain of Virginia, found the region, made a map of it, and named it New England.

Miles Standish and a few other men went ashore first to look for a good place to build their cabins. They searched for several days and finally found a spot on a good harbor deep enough for

ships. Just back of the harbor was a piece of cleared land and a hill on which to build a fort. Here they decided to make their homes, and to name their colony Plymouth, in memory of the port in England from which they had sailed. Before leaving the ship, the men met in the cabin of the *Mayflower* and signed an agreement to obey the laws which they themselves should make.



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Fig. 55. The famous rock at Plymouth



© Keystone View Co.

Fig. 56. In this little village of log houses and a fort the Pilgrim Fathers began life in the New World. Look at the picture on page 18. Do you see how different New England was from the flat country of the Chesapeake Bay region?

A winter of suffering. It was a cold winter morning, December 21, 1620, when the Pilgrims landed. On a big rock at the edge of the water they stepped as they left the ship which had been their home for so many weeks. This was the famous Plymouth Rock; it is still there, but now it is sheltered by a fine granite canopy or cover (Figs. 55 and 58). Can you not see the Pilgrims as they plodded up the hill through the snow to the one log house the men had built?

They built a few more log cabins as soon as they could, and made themselves as comfortable as possible. But that first winter was a terrible one for the Pilgrims. The weather was very cold, much colder than any they had known in England. They had brought food, but it had become old and stale. Sometimes the snow was so deep that the men could not hunt for wild animals. Often there was nothing to eat but fish, which were plentiful in Cape Cod Bay. Because they did not have the proper food and because they could not heat their rude cabins warmly enough, most of the colonists became ill. At one time there

were only five or six who were well enough to look after the sick. Before the warm days of spring came, half of the Pilgrims had died. John Carver, the governor, was one of them. But when the *Mayflower* sailed for England, not a Pilgrim went back to the old home.

Help from the Indians. One morning in early spring while the Pilgrims were holding a meeting in the little church, an Indian appeared. In a friendly tone he said, "Welcome, welcome, Englishmen!"—and he said it in English! "Welcome, welcome, Indian," said the white men. "Come into our cabin." This Indian was Samoset, who had learned a few English words from explorers.

Samoset came back the next day with Squanto, a brave who had once been captured by the crew of an English ship. In England he had learned how to speak a little English. After that Squanto was a friend of the white men. He taught the settlers how to plant corn, squash, and beans, and he showed them the best places to hunt and fish. He also promised to warn them if the Indians should plan to attack them.



© Underwood & Underwood

Fig. 57. The First Thanksgiving Day. Massasoit and eighty of his braves came to take part in the feasting and the games which lasted for three days.

The white men asked Squanto to bring Massasoit, the chief of the tribe, to visit them. Massasoit came, and liked the colonists so well that he smoked the peace pipe with them. Furthermore, he promised that his tribe should not harm them as long as he lived. For over fifty years there was peace between these Indians and the Pilgrims.

But not far away lived another tribe of Indians, the Narragansetts, whose chief, Canonicus, was angry when he heard that Massasoit was making friends with the English. Canonicus sent Governor Bradford a snake-skin full of arrows. This, of course, meant war. The governor stuffed the snake-skin with gunpowder and shot and sent it back. Canonicus was so frightened when he got the answer that he made his braves take the powder away and throw it into the water. At the same time he sent word to the Pilgrims that he would not trouble them again.

Yet the colonists did not feel safe, and Captain Miles Standish had six cannon placed on the roof of the little fort for protection if the Indians should attack them. The Indians often laughed at Miles Standish; he was a small man, and they thought a man should be big and strong. They said he was only a boy and ought to go back to the cabins and help the women. But when they saw that Standish protected his people so well, they began to think that he must be a very wise man, even though he was small.

The first Thanksgiving. When spring came and the Pilgrims were able to plant crops, they were more contented in the new land. They were happier still when more Pilgrims came from Holland and England. The crops grew well that summer, and there was plenty of food for all, and more. When all the crops were gathered in for the winter, Governor Bradford set aside a day for giving



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Fig. 58. Plymouth harbor today. Massasoit looks down upon the canopy that covers Plymouth Rock.

thanks for all their blessings. That was the first Thanksgiving Day in America.

An invitation was sent to Massasoit and his braves, and great preparations were made for the feast. The men hunted and fished, the children gathered baskets of nuts, and the women prepared many good things in the house, such as turkeys, and cranberries, and pumpkin pies. Perhaps they had maple-sugar cookies. Never in all his life had old Chief Massasoit seen so many good things to eat. Shaking his head sadly, he said, "The Great Spirit likes his white children best."

Plymouth colony grew so slowly that at the end of ten years only three hundred people lived there. Today we are proud of this little band of Pilgrims who endured so many hardships to build homes for themselves in America. They were the first settlers in what we now call New England.

THE STORY OF BOSTON

The Puritans. Ten years after the landing of the Pilgrims, a band of Puritans came to New England. This colony settled on

Massachusetts Bay, about thirty miles north of Plymouth, and was known as the Massachusetts Bay Colony. The name Massachusetts is an Indian word, and means Great Hills Place. This colony settled upon the three hills that sloped down to a fine, large, deep harbor. Today the great city of Boston stands here (Figs. 59 and 96). Upon one of these hills the settlers kept a beacon light to guide ships coming into the harbor. This part of Boston is today called Beacon Hill.

These colonists arrived in June, when the country was green and beautiful. How different it was from the Plymouth country on that wintry day when the *Mayflower* anchored in Cape Cod Bay! There were 900 men, women, and children in this group; so you see that the colony was a fair-sized one to begin with. These people brought horses and cattle, seeds for planting, tools, and gunpowder with them. Then, too, they brought plenty of clothing and food. The Massachusetts Bay colonists had a charter from the king, which gave them land and all the rights of Englishmen. This charter was always

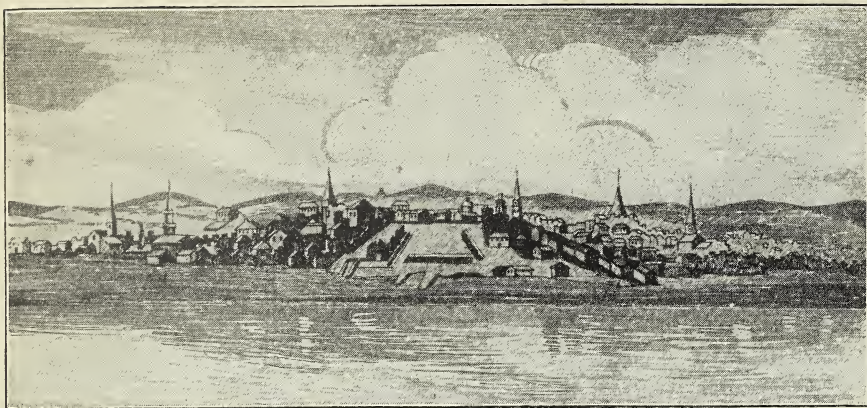


Fig. 59. Boston in the early days. We shall learn later what a great city this little village grew to be. Look at Figure 96 on page 65.

carefully guarded by the colonists as one of their dearest possessions. John Winthrop, a wealthy Englishman, was governor.

Like the Pilgrims, these people had been eager to get away from England because they

could not worship there as they wished. However, the new settlers did not have exactly the same feeling toward the king's church that the Pilgrims had. The Pilgrims had said: "We will separate ourselves from the king's church and found one of our own under a different name." But John Winthrop and his followers said: "We wish to worship God with our hearts and souls, with only the Bible and four walls; but we will not leave the Church of England." Really they never did obey the rules of that church after they came to America; so they were "Separatists" after all.

Growth of the new colony. The first summer the Puritans spent in the new land was a beautiful one, but it was followed by a long, cold winter. The people suffered greatly. They were used to the mild climate and the comfortable homes of England. Then, too, food ran very low that winter. Under such conditions it is not surprising that 200 of the Puritan colonists died. But when almost the last loaf of bread was in the oven, a ship from England sailed into the harbor bringing more settlers and a good supply of food. From that time on, people came to the new colony so rapidly that it had 15,000 inhabitants at the end of ten years. Villages sprang up all around this first town, for the new-

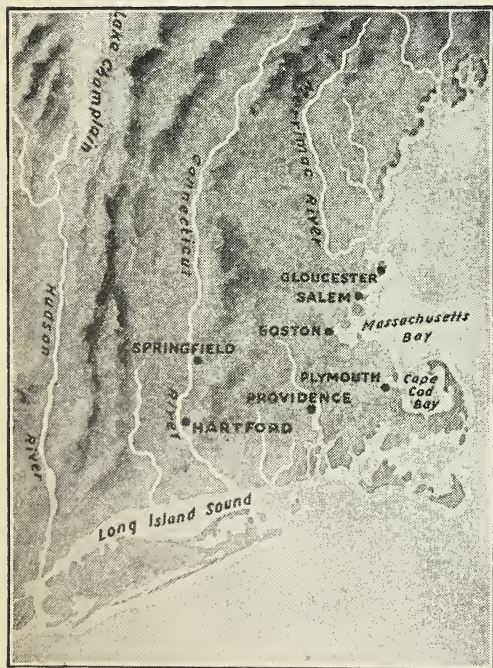


Fig. 60. Where the first settlements were made in New England.

comers did not all settle in Boston. But Boston was chosen as the capital of the Massachusetts Bay Colony.

New England colonies different from Virginia. For several reasons life was different—and in many ways harder—for the New England colonists than it was for the Virginians. First, the New England colonists built their homes close together, so that they lived almost as one family. New England became a region of towns. The plantation homes in Virginia were far apart. For many years there were few towns. Second, the growing season was short and the winters long and cold in New England. The growing season was long, and the winters short and mild in Virginia. Third, the soil around Plymouth and Massachusetts Bay was poor and thin, while that in Virginia was rich and deep. Fourth, the New England colonists were workers; the first Virginians were not.

You will remember also that the Virginians used their broad, deep, and slow-moving rivers for transporting their tobacco, and for travel. This was not the case in Massachusetts. Here the settlers found rivers that were narrow, swift, and only deep enough for canoes. So the only people who used them in the early days were men who trapped in the wilderness for fine fur-bearing animals. But we must not forget these swift New England rivers. We shall soon learn that they became more important to their region than the rivers of Virginia to theirs.

THE STORY OF ROGER WILLIAMS

What Roger Williams preached. In 1631 Roger Williams, a Puritan leader, came to New England. Williams was a man who was not afraid to say what he believed, and often preached things that the Puritans of Boston

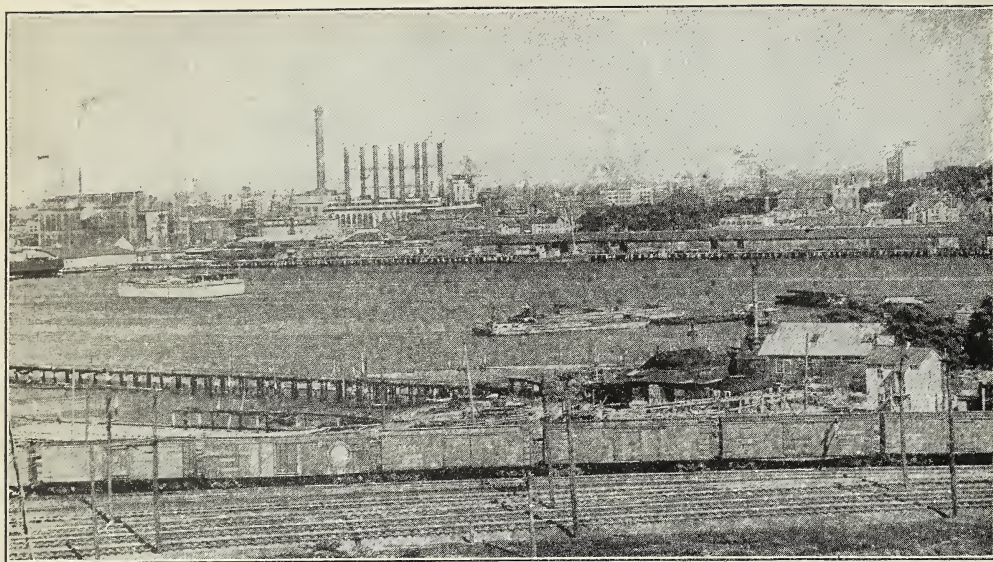


Courtesy Wm. H. Wise Co.

Fig. 61. The Narragansetts give Roger Williams a home.

and the Pilgrims of Plymouth did not like to hear. Soon he got into trouble with them. One thing which Williams said was: "Everyone has a right to his own opinion and should be allowed to go to church or not, as he pleases." Another thing was: "The Indians own the land in America, and the king of England has no right to give it away. We must pay the red men for the land." The leading men of Boston said: "This will never do. Williams will stir up trouble in the church and with the Indians. Let us send him back to England."

Williams and the Indians. But Roger Williams did not wish to go back to England. So, as the men were coming to arrest him, he kissed his wife and children good-by and disappeared into the forest. It was in the dead of winter, and a snowstorm was raging. Williams slept in the trunk of a hollow tree that night. The next morning he was almost frozen and had nothing to eat. But he started out, and before the end of the day he came to an Indian village. The Indians invited him into the warm wigwam. How thankful Williams was! These Indians were known as Narragansetts. Their land was located around Narragansett Bay, in what is now the state of Rhode Island. Williams lived with these Indians all that winter. He



By Ewing Galloway, N. Y.

Fig. 62. The city of Providence, grown from the little settlement started by Roger Williams

had learned their language before he was put out of the colony.

The red men who came to know Roger Williams learned to love him. They did not often find a white man who was so honest, so kind, and so interested in them. They called him brother. "If I must always be a wanderer," thought Williams, "I will live with these Indians and spend my days in teaching them." But when he thought of his family, and of his friends in Boston and Plymouth who longed to live where they could say what they believed, he said: "I will start a new colony. I will buy some land from these Indians and make a home where everyone who wishes freedom of worship may come."

The founding of Providence. Williams then went to Canonicus, the chief of the Narragansetts, and asked if he might buy some land. The old chief said, "Because you are our brother, I will give you as much as you want." Williams was careful to select land that would not be in Massachusetts or Plymouth territory. In 1636 he made a settlement near Narragansett Bay and named it

Providence (Fig. 62). Here he welcomed all who were unhappy in other colonies because of their religious beliefs. How glad Williams was when he was able to bring his wife and children, from whom he had been separated so long, to this new home.

When Providence was first founded, the colonists had hardly enough to eat. However, some kind friends in Boston sent them a boatload of food. Some of the Boston and Plymouth people would have allowed the Rhode Islanders to starve to death. They called Providence "a nest of wickedness," just because the people of Providence did not believe as the leaders of Boston believed.

Not long after Providence was settled, Williams was able to do a kindness to the very people who had driven him out of Massachusetts. The great hunting grounds of the Pequot Indian tribes lay southwest of the Massachusetts Bay Colony, in what is now the eastern part of Connecticut. The Pequots were afraid that the English would soon take all their hunting grounds, because the colonists were coming in such large num-

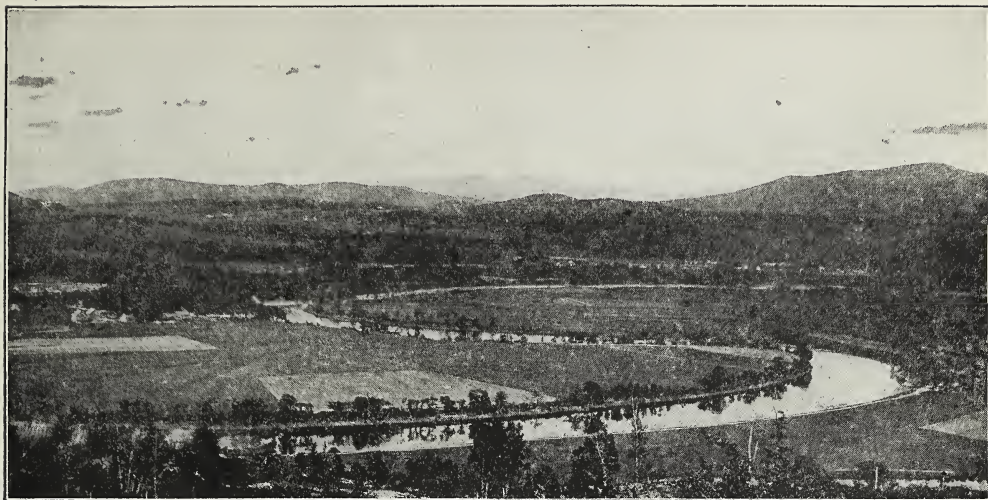


Fig. 63. The beautiful Connecticut valley where Hooker and his followers settled

bers; so they tried to get the Narragansetts to join them in driving out the colonists.

When the colonists of Massachusetts and Plymouth learned of this, they begged Williams to plead with the Narragansetts not to join the Pequots. Because of their love for their brother, the Narragansetts refused to go to war, and the Pequots gave up their plan.

Roger Williams made wise laws for his colony. He taught the people that they might think as they liked about their religion, but that they must obey the laws of Providence, be kind to each other, and work hard.

THE CONNECTICUT VALLEY

Thomas Hooker. In the same year that Roger Williams founded Providence, Thomas Hooker was preaching in one of the Massachusetts Bay towns. He said, "Every man has a right to vote, whether he is a church member or not." The Puritans would not let men vote unless they belonged to the church. Hooker knew that he, like Williams, would be sent away if he talked as he believed. So he made up his mind to leave Massachusetts and start a new colony. He soon found that there were many others who were ready to go with him.

The first inland colony—Hartford. Hooker had learned of a fertile valley lying to the west of the Massachusetts Colony (Fig. 63). This was the valley of the beautiful Connecticut River, where the winters were not quite so long and severe as they were around Boston. The cold winds from the ocean were somewhat shut out, and in the more level land of the valley crops could be raised more easily. Hooker and his hundreds of followers set out for this valley in 1636, early enough for spring planting. They carried with them their household goods and their farming tools, and drove along horses, cows, pigs, and goats.

As the journey led through an unknown wilderness, these people always had to keep a sharp look-out for Indians and wild animals. At night the men took turns guarding. After two weeks of hard traveling they came to the end of their journey and made a settlement where the city of Hartford now stands. These weary travelers did not stop to rest, but immediately set to work building homes; then they built a church and a school.

Connecticut was the first of the English colonies to be founded inland from the coast. See if you can tell quickly the various bodies



Courtesy Boston and Maine Railroad

Fig. 64. The forest-covered hills and mountains of New Hampshire, Vermont, and Maine were beautiful and furnished fine lumber for ship-building, but they made poor land for farming.

of water on which the other colonies were located. To us of today this Connecticut settlement is very important because it was the first big attempt at moving westward, which was not to end until our country was settled from the Atlantic Ocean to the Pacific Ocean, 200 years later.

OTHER NEW ENGLAND COLONIES

New Hampshire. For a long time the Massachusetts Bay Colony, like the others, had no real boundary lines and for many years claimed all the land that is now included in the states of New Hampshire and Maine. In 1622 the land between the Kennebec and Merrimac rivers had been granted to two Englishmen, Ferdinando Gorges and John Mason. This land, which was named the Province of Maine, was to extend back sixty miles from the sea. Later, this territory was divided, and the part that now forms the southern section of New Hampshire fell to Mason. He named it after the county of Hampshire, England, where he had lived.

Not knowing what a wild country his new possession was, Mason tried to start a colony

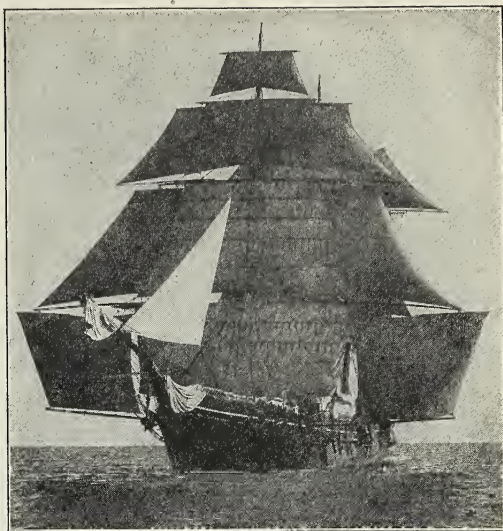
on the Merrimac River. He planned to have a great estate and many people to farm the land for him, as he had in England. The men Mason sent as tenants had hard work getting enough for their families to eat and wear through the long cold winters. About all they could do in the summer was to fight off the red men and raise a crop of corn. The soil was very thin, and the rocky fields made poor farm land. Some of the colonists were Scotch, and many had been fishermen in Scotland. Not being able to make much of a living from farming, they soon settled down to fishing and trading for furs with the Indians. So slowly did this colony grow that after twenty years it had only 1200 people.

The tall, straight pines and spruces of New Hampshire made excellent masts for ships; and for many years the making of masts was an important business in the colony. In the winter and spring these trees were cut, trimmed full length, and dragged to the Merrimac River by ox teams. They were then floated down to the mouth of the river, made into masts, and most of them shipped to England.

Maine. In the division of land Gorges received a part of what is now the state of Maine. He made the first settlement in 1623 on the Kennebec River. Because of the fine timber in this region and the many fine harbors, Maine began very early to build ships. Trees were scarce in England, and the wood of Maine's spruce and hardwood trees was excellent for the mother country's ship-building. Up until thirty or forty years ago ship-building was Maine's greatest industry; it is said that half of all the wooden vessels in the world were built on her coast. That, of course, was in the days of wooden ships. Now our largest vessels are built of steel.

These New England ships were used not only for fishing but also for sailing across the sea to England with cargoes of dried fish and lumber. Often the ship was sold with the cargo. New England ships were also used for trading with the West Indies. The Puritans had become sailors and ship-builders. Perhaps you have read stories of Yankee sea captains and their fast and beautiful clipper sailing ships which they sailed to all parts of the world. These clipper ships were the best in the world. They were built early in the last century along the coast of New England. Maine is called the Pine Tree State because of her white-pine forests. No one will ever know how many trees have been cut in the state, and gone twisting and rolling down the dashing Penobscot, Androscoggin, and Kennebec rivers to be made into ships.

Vermont. No permanent settlement was made in Vermont for more than a hundred years after the *Mayflower* sailed into Cape Cod Bay. This region was a vast wilderness, and the only white men who went there were traders, who bought furs from the Indians. Champlain, a Frenchman, had come through there a long time before. When he saw the forest-clad mountains, always so green, he named them "Verde Mont," the French for green mountain. So when this section was finally settled, it was named Vermont.



© Ewing Galloway

Fig. 65. Beautiful ships like this one, built from New England's trees, sailed the seas of the world before steamships came.

THE LIFE OF THE COLONISTS

Churches. You remember that the Pilgrims and the Puritans built their homes close together, with the meeting-house near the center. The church was the largest and strongest building of all and was often used as a fort as well as for religious services. Each town managed its own affairs and gave out land to the new settlers.

The Pilgrims and the Puritans were as strict about their church as the king of England was about his. For a long time the officers of the church really ruled the colonies. No man could vote unless he was a member of the church, and everyone was forced to go to church. Roger Williams and Thomas Hooker, you remember, made new settlements because they disagreed with the church officers about these two laws.

Among the Pilgrims and Puritans the whole family went to services early every Sunday morning (Fig. 66). All were serious and dignified, for in those days it was not proper to laugh and talk on the Sabbath day. At church the older boys sat by themselves,



Fig. 66. The Pilgrims had ever to be watchful of attack from the Indians. They even carried their guns with them when they went to church.

and a man with a long stick kept them in order. The smaller children sat with their fathers and mothers. In winter the churches were very cold, and sometimes the mother took a panful of burning coals along to keep warm the feet of the little ones. Often the prayer was an hour long, but the children were made to stand quietly through it all. If the minister did not finish his sermon in the morning, he preached again in the afternoon. A Puritan Sabbath was a dull day for boys and girls. Neither work nor play was allowed from Saturday night to Sunday night.

Homes, churches, and schools were built of logs cut by the settlers in their own forests. Burning logs in a great fireplace kept the living-room warm, and the cheerful glow from the fire was often the only light the family had in the evening. In winter the bedrooms were almost as cold as the outdoors. Tallow candles were used for lights. These were made by dipping and redipping a coarse string into melted fat, or tallow, and allowing the tallow to harden each time.

Schools. Today, the people of New England are proud of the fact that schoolhouses were among the first buildings to be erected when a colony was founded. The school was

almost as solemn as church. If the school-children were noisy, the teacher tapped them on the head with a heavy iron thimble. This was called "thimble pie." The only reader the boys and girls had was the *New England Primer* (Fig. 69). In it were a nursery prayer, the Lord's Prayer, the Ten Commandments, and some religious rimes like those in the picture. The boys and the girls went to separate schools, and the girls were always taught by a woman teacher.

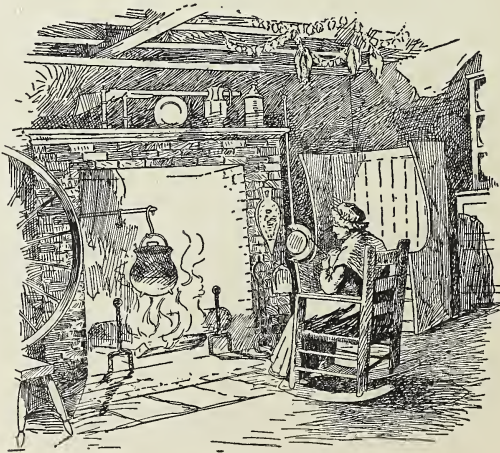


Fig. 67. A colonial living-room

A girl's education was quickly over in those days. As soon as she learned to write a little and to read the *New England Primer*, she stayed at home to learn to spin, weave, and do other housework. The boys went to school a little longer, and a few were even sent to college, where the principal study was Latin. The teacher was paid in beaver skins, corn, and other produce. He had to trade these articles for the things he needed.

In addition to their grade schools, the Puritans also built their own colleges just as soon as they could. They would not send their children to college in England because the college students there had to attend church serv-

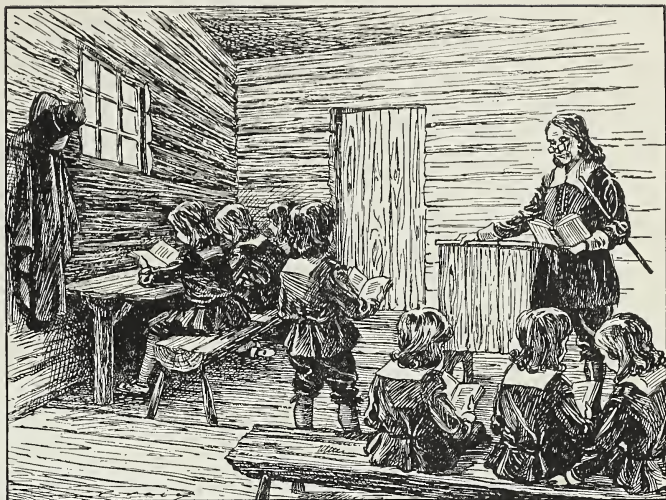


Fig. 68. A colonial schoolroom

ices in the Church of England, from which the Puritans had separated. The first college in the United States was started in 1638 in Boston. Two years later the Reverend John Harvard gave half his fortune and all his books to the college. It was named Harvard in his honor.

Play. Boys and girls the world over must have some play. The Puritan children had their fun, even though they did not play baseball or basketball. There were no movies, and their parents probably would not have allowed them to go if there had been. But they could go fishing and really catch a string of speckled trout, and the boys early learned to use a gun and had great sport hunting. In the fall it was fun to gather hickory nuts, beechnuts, and butternuts, and they might find plenty of wild grapes. Winter was the glorious time for building snow forts and for fighting battles with snow balls, just as boys and girls in New England do today. There were no autos or street-cars to bother the boys and girls when they coasted down the long hills on the sleds they made from hickory limbs. And they could skate to their hearts' content. The long winter evenings were fine

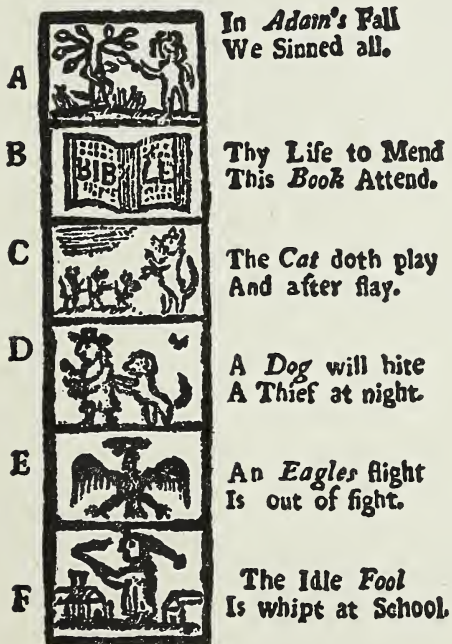


Fig. 69. Part of the New England Primer



From the painting by Wordsworth Thompson
Courtesy Metropolitan Museum of Art

Fig. 70. A New England corn-husking bee

for popping corn in the fireplace, playing games, and telling stories.

The older folks enjoyed the house-raising bees when all the men went into the woods, cut the logs, and helped the neighbor build his new home. Then there were corn-husking bees, quilting parties, and Thanksgiving feasts. You may be sure that the Puritans were not always solemn long-faced people.

Food and clothing. Nowadays most of the things we need are provided for us by others. We must all have food, clothing, and shelter, or we cannot live. If we live in the city, we get our foods from the grocery, the butcher shop, and the dairy. We buy our clothes ready-made. Our homes are those we rent, or that we have paid some one to build for us. They are heated by coal or gas that we buy, and are lighted by gas, electricity, or kerosene oil.

Such was not the case with the early New England settlers. They produced most of the things they needed for their homes. They raised their own corn and wheat from which their mush and bread were made. They depended upon their guns for getting fresh meat. They raised the sheep from which came the wool for their heavy winter clothes. They grew the flax from which to make the

linen for their lighter garments, and for thread, sheets, towels, and tablecloths. Skins of farm and wild animals furnished the leather for shoes and mittens.

Everybody was careful of his shoes, for each pair had to last a year. In summer the colonists walked barefoot to church and put on their precious shoes just before entering. A shoemaker came once a year and made shoes for all the family (Fig. 71). How the early settlers of Boston and Plymouth would stare if they could see the great shoe factories in the cities about Boston today, the millions of shoes made in them, and the great

machine shops that make the machinery for these factories.

Travel. For more than a hundred years there were almost no roads in the country, and few wagons or carriages. The few goods that had to be taken from one place to another were carried on horseback or hauled on sleds. What little traveling the people found necessary was done on foot or horseback. We glide through the country today in our automobiles at a rate of forty or more miles an hour. The traveler on horseback could hardly go as far as that in a day. Women and children did not make many trips. When the wife did go, she rode on the same horse with her husband on a pillion, or seat, behind the saddle, just as the women did in Virginia.

You think the Puritans had a hard time, don't you? They did have a hard time; but in spite of the dangers and the troubles and their strictness, they did much to make our country the great nation that it is today. Many of our country's great men were born and reared in New England, and we owe a great debt to the Puritans.

QUESTIONS TO ANSWER

1. What difference was there in going to church in England three hundred years ago and in this

country today? 2. The Pilgrims were welcome in Holland. Why did they come to America? 3. Where did the Pilgrims intend to settle? Why did they not settle there? 4. How did New England get its name?

5. How do you know that the Pilgrims were not the first white people to visit New England? 6. If a Virginia planter had come to Plymouth colony, do you think he would have wished to stay? Why? 7. Why did not the Puritans have as hard a time as the Pilgrims when they first landed? 8. Why did the Puritans choose Boston as the place to settle? 9. Why could not the settlers in Massachusetts use the rivers for travel as the people of Virginia used the James River?

10. Locate the country of the Narragansett Indians and the bay named for the tribe. How do you know from the story that these Indians were not far from Boston? 11. Learn from the table of states (page 463) how many square miles of area there are in Rhode Island. In your home state. Into how many Rhode Islands could your state be made? 12. Why did Roger Williams settle Providence on the bay? 13. How did Thomas Hooker and his people move to the Connecticut Valley? 14. Trace the Connecticut River from its source to its mouth. What states does it connect? What states does it cut? Is the Connecticut Valley wide like the James Valley? 15. Large ships could not come up the river to Hartford. What city is now located on the coast south of Hartford?

16. Would you have enjoyed a Sunday in Plymouth? Why? 17. How did the Puritans get their food, clothing, and houses? 18. How were their houses lighted and heated? 19. What took the place of trains, street-cars, and automobiles?

20. Why did the colonies in Maine, New Hampshire, and Vermont grow so slowly? In what ways did the people of these colonies make a living? 21. In what parts of New Hampshire and Maine do you find the cities (study the map on page 54)? Name three rivers in these states.



Courtesy Swift and Co.

Fig. 71. A colonial shoemaker at work on the shoes for the family

THINGS TO DO

1. On an outline map of the world draw a line from England to Chesapeake Bay. Draw another line to show how the Pilgrims were driven from that route and landed in Cape Cod Bay. Show Plymouth and Boston on your map. 2. Imagine that you are Josiah Hampden in Plymouth; write a letter to your brother Samuel in Plymouth, England, and tell him about life in the colony.

3. Choose the parts and act the scene of the Pilgrims going to church. Do not forget the man who kept the big boys awake. 4. Imagine yourself to be a Puritan mother and write out the list of foods you would have for dinner.

Books to read: Butterworth, "The Powder Candle," *Child-Library Readers, Book IV*, p. 185; Crowe, *Studies in American History*, pp. 117-119, 215-235; Eekinrode, *Told in Story*, pp. 60-77; Evans, *America First*, pp. 45-58; Hubbard, *Little American History Plays for Little Americans*, pp. 23-41; Logie, *From Columbus to Lincoln*, pp. 47-54, 70-80; Long, *Early Settlements in America*, pp. 175-207, 208-212, 212-213; McFee, *American Heroes From History*, pp. 1-15; Nida, *Following Columbus*, pp. 138-145, 179-203; Otis, *Ruth of Boston*; Preston, "The First Thanksgiving Day," *The Elson Reader, Book V*, page 92; Southworth, *Builders of Our Country, Book I*, pp. 89-122.

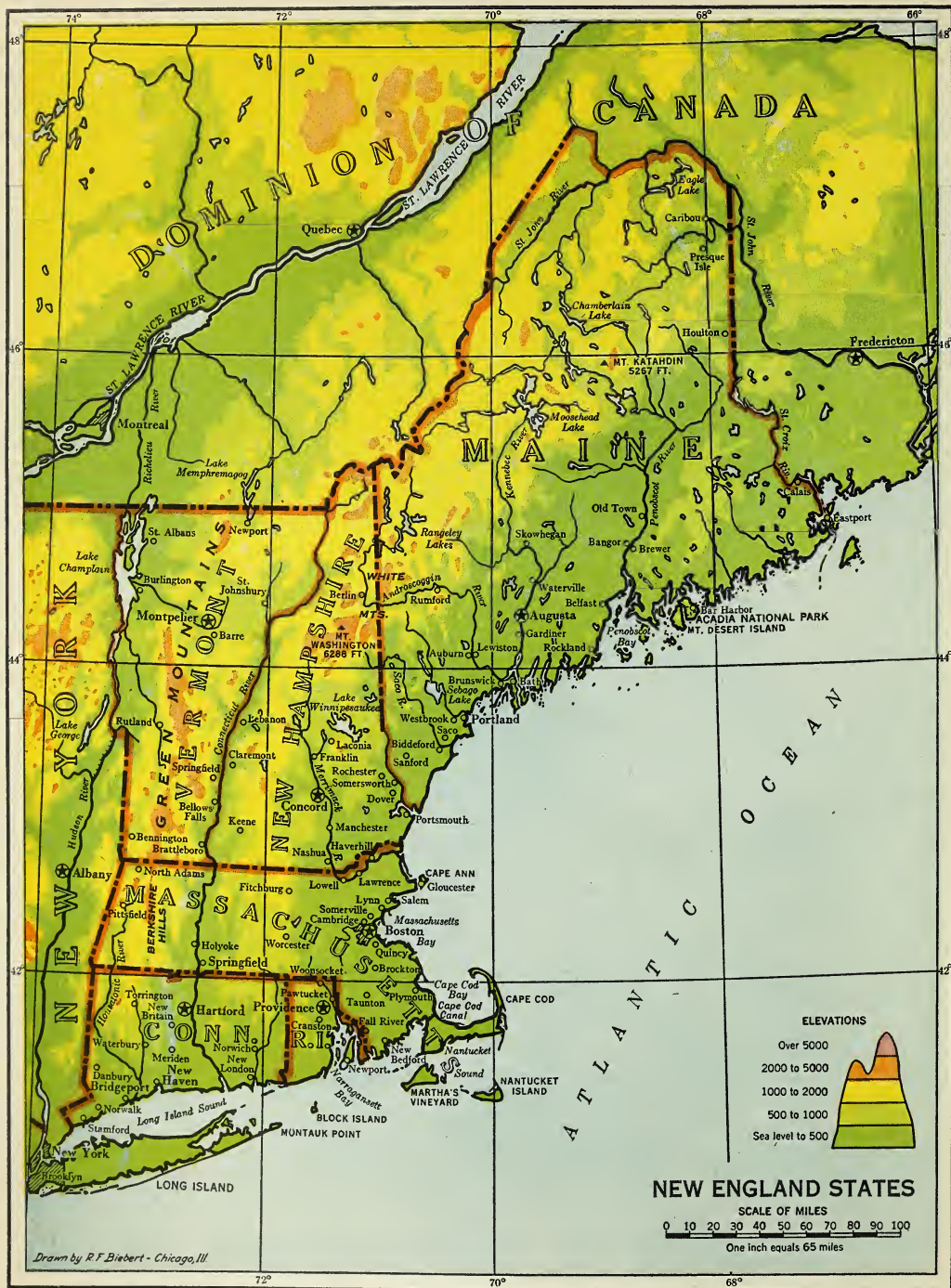


Fig. 72. Map of the New England states



Fig. 73. A potato field in Aroostook County, the famous potato section of Maine

Courtesy J. I. Case Company

HOW THE NEW ENGLANDERS MAKE A LIVING

FARMING

Potatoes, cranberries, and tobacco. New England is not a good region for farming. Most of the land is hilly, and the soil is thin and rocky. Only a small part of the food that the New Englanders need is raised there. Vegetables and apples are the main food crops; and dairying is a leading industry, for the many big cities need much milk. There are four particular products of New England about which you should learn: potatoes, cranberries, tobacco, and maple sugar.

Northeastern Maine is the potato section. In Aroostook County alone are grown about one-sixth of the potatoes produced in the whole United States. More than half the cranberries for our Thanksgiving dinners are raised in Massachusetts, chiefly in the bogs and marshes of Cape Cod. The Puritan leaders tried to prevent the use of tobacco by not allowing any to be brought in from Virginia and the West Indies. So the men of Connecticut who wanted tobacco planted it for themselves, and today we see it growing along the banks of the Connecticut (Fig. 75). This is a kind of tobacco that does not need

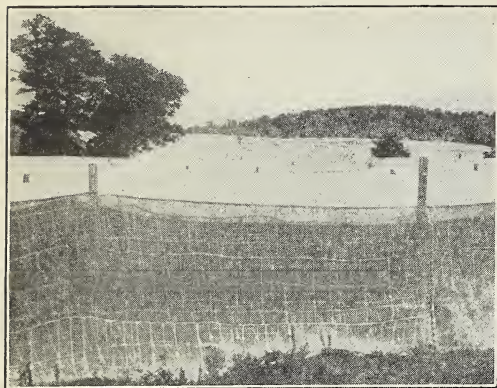
so long a hot season as the kind planted in Virginia. By using fertilizer to keep the soil rich the farmers in this valley have raised tobacco on the same farms all these years.

Maple sugar. The Puritans used maple sugar to sweeten their mince pies and cookies. Do you know how maple sugar and maple



Fig. 74. Picking cranberries on Cape Cod peninsula

Courtesy E. Wareham Cranberry Experimental Station



© Keystone View Co.

Fig. 75. Tobacco in Connecticut has to be kept warm with a blanket. This netting helps to hold the heat.

syrup are made? When the first spring days come, the sap begins to run up through the trees to the branches to make the leaves grow. The farmer taps the trees by making a small hole in the trunk, puts in a spout, and hangs a bucket to catch the sap (Fig. 76).

The sap is poured into a shallow pan with a fire underneath and boiled until it is thick enough for syrup. The syrup is then allowed to cool, poured into cans, and sold for eating on pancakes and waffles.

Sometimes the syrup is boiled a little longer so that when it cools, it hardens into sugar. This is moulded into cakes, and most of it is sold for candy-making. The maple-sugar region is in the northeastern part of the United States and in Canada, but Vermont is the maple-sugar land.

FISHING

Codfish saved the Pilgrims from starvation during their first year in the new land. These fish were so plentiful that the colonists could easily catch all they wanted. It was not

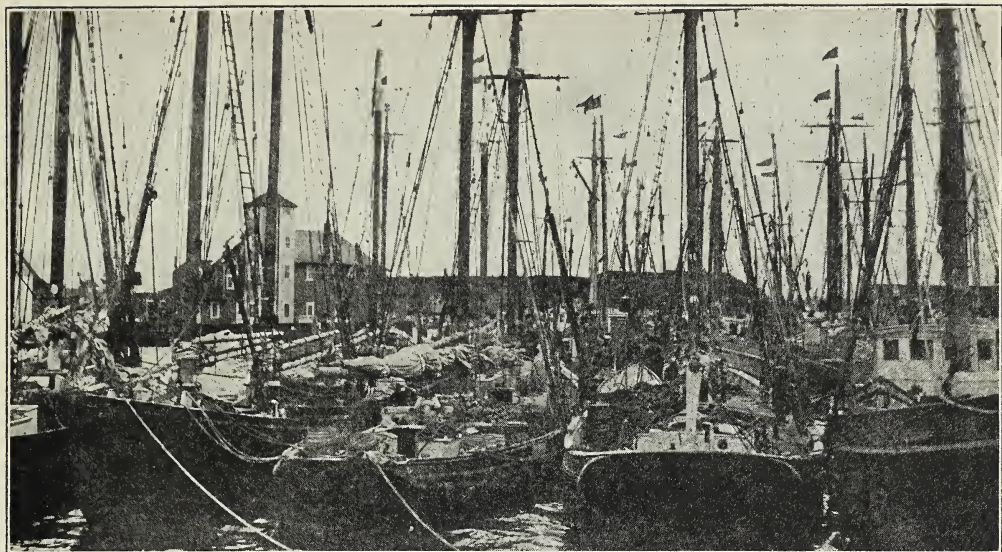
long before they were sending shiploads of dried codfish to England each year. Codfish saved this colony as tobacco-raising saved the one in Virginia. The people of Massachusetts were so grateful for the codfish that many years ago they made a great wooden codfish for their emblem and hung it in the statehouse in Boston. Fishing is still important in New England. Boston is the leading fish market, and most of the fish from there are shipped fresh. Gloucester, famous since colonial days for its fishing boats, is the center for dried and salted cod and other fish.

Fishing for cod. Codfish like a cool home. Because of this, they are found in American waters mostly along the New England coast and the Grand Banks of Newfoundland. They devour so greedily every other form of fish life smaller than themselves that they grow very rapidly. The largest codfish ever caught in American waters weighed 211 pounds, and was over six feet long. Many have been caught that weighed over 100 pounds, but the ordinary fish weighs from ten to thirty-five pounds. The cod is a winter fish, as well as a cold- and deep-water one; so



Courtesy Vermont Publicity Department

Fig. 76. A maple-sugar grove in Vermont. Into the pails is dripping the sweet sap. It is a little thicker than water and looks much like it, although maple syrup and sugar are brown.



© Underwood & Underwood

Fig. 77. A Gloucester fishing fleet. If you look carefully, you can see the dories on the decks.

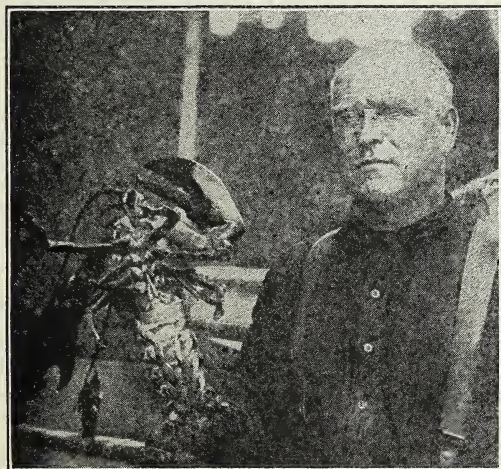
it begins to bite early in October and continues to do so through April.

Some of the fishermen of the New England coast catch their cod in the waters near their homes and ship them to cities and towns near by. Some are sold fresh, and the re-

mainder salted or canned for districts too far away to get the fresh fish. If you live at some distance from cod waters, you have probably bought canned or salted codfish from your groceryman.

Many of the fishing fleets go to what are called the Grand Banks. These "banks," or shallow places in the ocean, are off the coast of Newfoundland. There the cod are found in enormous numbers. The fishermen must take a good supply of food for themselves and plenty of bait for the fish, for the trip may last for weeks. They go to the Banks in sailing vessels (Fig. 77) or in steamboats. Each vessel carries several rowboats, or dories on board.

When the fleet reaches the Banks, the men lower the dories into the water, and row away in them to the fishing ground. Every dory carries from two to four men, and each crew carries a long fishing line, or trawl, coiled in the boat. Some of the trawls are a mile long. Many short lines with baited hooks are tied to each trawl. The line is floated on the surface of the water by means



© Keystone View Co.

Fig. 78. Along the rocky coast of Maine are lobster fisheries. Portland is the lobster market.



Fig. 79. Cod fisherman hauling in the trawl lines

of wood or cork floats, and each end of it is anchored to the bottom of the ocean. When the men have given the fish time to bite, they row along the trawl, take the fish from the hooks, and load them into their boats.

Herring and mackerel are also caught in the cool waters along the coast from New England to Newfoundland. These fish move from place to place in schools, or big groups, near the top of the water; therefore fishermen catch them in nets, or seines, as they are called. Sometimes airplanes are used to find the herring or mackerel school. When a school is found, the news may be sent to the fishing boats by radio.

The fishermen face many dangers. Sometimes when they are out in their dories, a fog may come up, and they cannot find their way back to the big boat. They may drift about for days before they are picked up. A great ocean steamer may come through the

fog or the dark night and run the fishermen down. Then, too, there is danger from icebergs. If a storm comes up, their boats may be so loaded with fish that the sea washes over the side. But until all other hope is gone, the men will not throw out the fish. They have worked too hard to get them. The living for themselves and their families depends upon the fish. When it is time for father's return, the family watches anxiously, and all are grateful when he is safe at home again.

MANUFACTURING

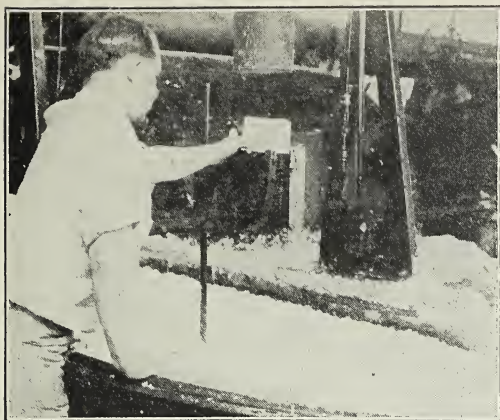
Paper-making. Maine is the only New England state that now has large forests. These are mostly spruce, and it may be a surprise to you to learn that from these spruce trees most of our paper is made. Maine not only has the spruce forests, but it also has swift streams that supply water-power for running the machinery of the paper mills.

When the logs are to be used for making paper, the bark is often taken off in the



Courtesy Maine Central Railroad

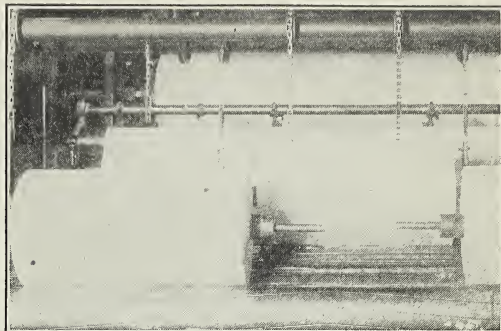
Fig. 80. Pulp wood ready to be floated down stream to the pulp mill



Courtesy S. D. Warren Co.

Fig. 81. Wood-pulp in the vat

forest. The logs are cut into four-foot lengths. When these reach the mill, they are ground up by great crushers. The finely ground wood is soaked first in acid and then in water until it is a pasty wood-pulp. The wet pulp flows on to a screen which allows the water to drain out. When the fiber becomes paper, it goes through rollers which dry it and smooth it. The paper is then cut into



Courtesy S. D. Warren Co.

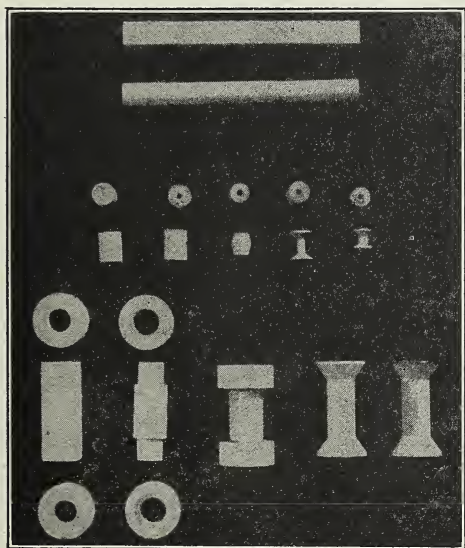
Fig. 82. Rolls of paper ready for the print-shop sheets, or made up into rolls, and is shipped to the print-shops of the big cities.

For a long time our forests were cut more rapidly than new trees were grown. We were in danger of using up our supply of wood! You can see how this could happen, for it is said that it takes a small forest to print the Sunday edition of a great newspaper. Now we have laws which protect our trees.

In this region there are fine forests of hard-woods—birch, hickory, and maple. The wood from these trees is used to make small articles, such as toothpicks and clothes-pins.

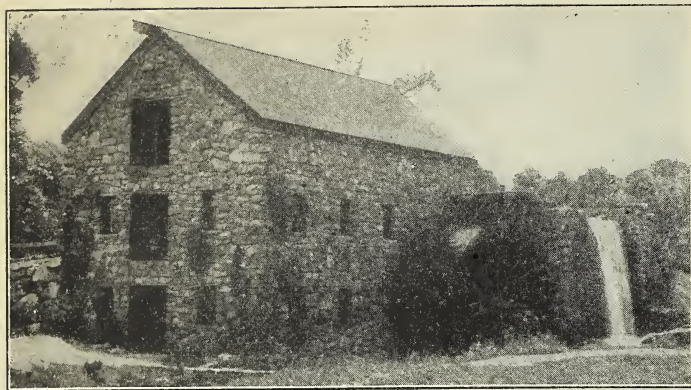
Yankee “notions.” “Yankee,” it is thought, was an Indian word for “English.” “Notion” sometimes means a small, useful article. The Yankees had many good ideas for making such articles. For instance, a Yankee housewife once hung her washing on the bushes to dry, but some of the clothes blew away. Her husband strung a rope from the house to the barn, on which to hang the clothes; but still things would sometimes blow away. “I have a notion I can make something that will hold them,” Mr. Yankee said. So he took a piece of wood and whittled—all Yankees like to whittle—a round stick about five inches long, with a deep notch cut in from one end. That was a clothes-pin, and a Yankee notion! We say that he had invented something.

You remember that the Puritans made nearly all the tools and utensils used about the house and the farm. They had to, for



Courtesy Maine Hardware Association

Fig. 83. From a squared stick of Maine white birch to a spool



© Keystone View Co.

Fig. 84. An old New England mill. Water pouring over the wheel made it turn. When power was not needed, the water was run off to the side.

there was no other way for them to get these articles. Of course they tried to make these articles better all the time, and also to make other tools to save work. The New Englanders got the habit, and that is why so many little things that we use every day have been invented in New England. Of course, the Yankee invented big things, too, as we shall see. When one man invented, or improved, an article that made work easier, his neighbors and others wanted it; and because of this, he made the article to sell. As the inventor sold more and more of the articles, he had to hire other men to help him; and he had to put up a building in which to work. You see, he had to start a factory.

Rivers and streams to run machinery. As the Yankee was always looking for a way to save labor, he soon found a way to make his notions without making them by hand, one at a time. He set the streams to work. Perhaps you have waded upstream where the current was so swift that it almost pulled your feet out from under you. You have seen your lawn sprinkler whirling around. You know then that

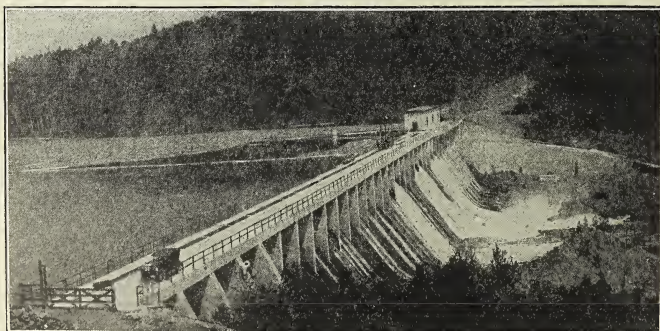
swift-running water is powerful. The New England rivers, as we have learned, are swiftly flowing streams. The land is so rocky and hilly and the rivers rush down so rapidly that many falls and rapids are formed. These were what the Yankee needed to run machinery for making his notions.

The Puritan had early learned to use these rapids and falls to run the wheel to grind his corn and wheat (Fig. 84). Then he saw

that he could use the same wheel for running other machines than the grinder. This meant that he had plenty of power to run any new machines that he might invent for making articles. Now we know two reasons why New England has many factories. State them.

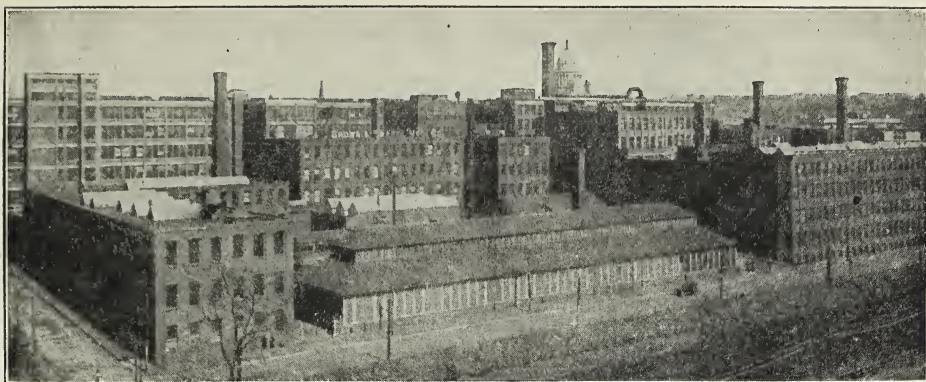
Iron and other metals. We need not learn the names of the inventors of the many useful articles, but we shall learn about a few whose inventions have meant so much to New England and to our country.

Joseph Jenks, born in England, was the first American inventor of whom we know anything. He learned the trade of iron worker and machinist, and settled in Lynn, Massachusetts, about 1645. Here he became



Courtesy Maine Central Railroad

Fig. 85. A power dam today. The rushing waters now turn dynamos that produce electricity to run the machines.



© Keystone View Co.

Fig. 86. About 5000 men work in this great machine- and tool-shop at Providence, one of the largest in the world. Machine tools and fine measuring tools are made here.

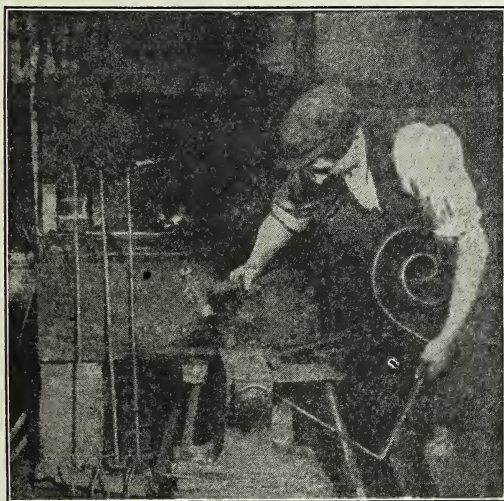
superintendent of an iron foundry, the first in the United States. Jenks was such a clever fellow and worked out so many inventions in iron and brass to save time and labor for his men, that the General Court of Massachusetts gave him a patent, or the right, to make a mill engine to be run by water. Because of this patent no one else in Massachusetts had

the right to make such an engine. This was the first patent ever granted in this country. Later he was granted patents for making scythes, saws, and other edged tools.

When the colonists needed to make gold, silver, and other metals into money, Joseph Jenks made the machines for stamping the coins into shape. The officers of the government in Boston asked him to build a fire engine, and he did. His son, Joseph Jenks, Jr., went to Pawtucket and built a machine shop on the river bank where he could use the falls for power. His business prospered, and he built a sawmill and mills for making things of iron. He trained other men so that they became experts in iron-working. Many useful things for the housewife, the farmer, the fisherman, and the factories were invented here.

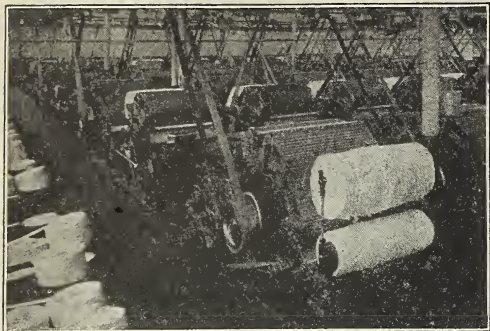
You will find that machine shops for making and repairing factory machines are always near the factories. Then, when a machine must be repaired, the work can be done near by. So there grew up all around these factories many shops where machines and tools were repaired and made (Fig. 86).

Silverware had been used for hundreds of years, but only those with plenty of money could afford to buy it. Look at your table knife and see if you can find "Rogers Brothers 1847" on it. The Rogers brothers discovered



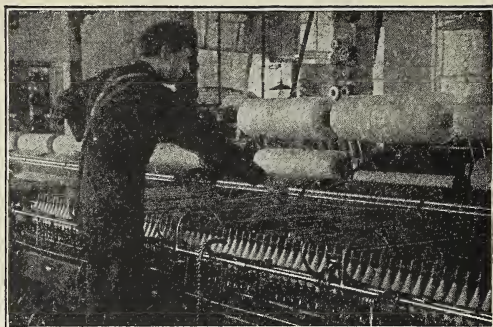
© Keystone View Co.

Fig. 87. Hammering out iron goods by hand as in old days. Now machines hammer, cut, and roll iron and steel into articles we can use. Notice the forge in this picture, where the iron is heated white-hot so that it is soft enough to be hammered into shape.



Visual Education Service

Fig. 88. The cotton is first cleaned, fluffed, and made into rolls. Then machines twist it into loose ropes.



Visual Education Service

Fig. 89. The loose ropes of cotton are twisted finer and finer into the thread for sewing and weaving.

a way to cover another metal with a thin coating of silver. This is called silver-plating, and gives us silver-plated knives, forks, and spoons, less costly than solid silver. A large part of the silverware that we use today is produced in Connecticut.

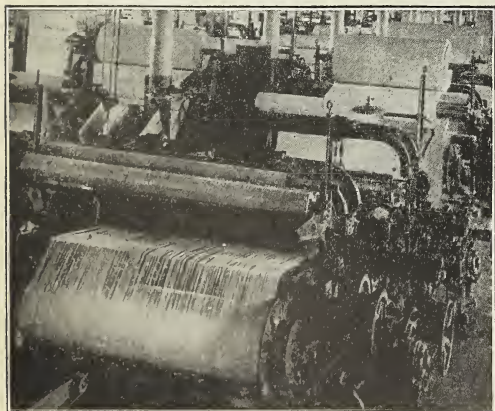
Brass, which is made from a mixture of copper and zinc, had been used for many years. The Yankees improved it and invented many new ways of using it. Then they improved ways of covering articles of iron and brass with a thin coating of nickel. You see, iron rusts easily, and brass is hard to keep polished. Nickel can be kept bright and shiny easily, and it looks nice. Hundreds of articles are made of brass and plated with

nickel. Waterbury, Connecticut, makes so many articles of brass that it is sometimes called the Brass City.

Cotton mills. England did not want the colonists to manufacture anything because she wanted them to buy things from her. She would not sell them any machinery, or even allow anyone to carry the plans of a machine out of England. A machine for spinning, or twisting, cotton or wool into thread was invented in England by a man named Arkwright. Samuel Slater became Arkwright's apprentice, or helper, and learned the machine trade from him. Slater planned to come to America and make a spinning machine like Arkwright's; and he did come. Since he could not carry the plan out of England, he could only do his best to remember it.

Slater went to Baltimore, Philadelphia, and New York, trying to interest men in his machine, but no one would listen to him. Finally, he succeeded in interesting Joseph Jenks, Jr., and with Jenks's help, Slater, in 1790, built the first cotton mill in America (Fig. 92). It was located on the Pawtucket River. Shortly after this a machine was invented that would weave thread into cloth. Now there are cotton mills in many cities in New England, among them being Pawtucket, Fall River, New Bedford, and Lowell.

Woolen mills. With a few changes, these machines for spinning and weaving cotton



Visual Education Service

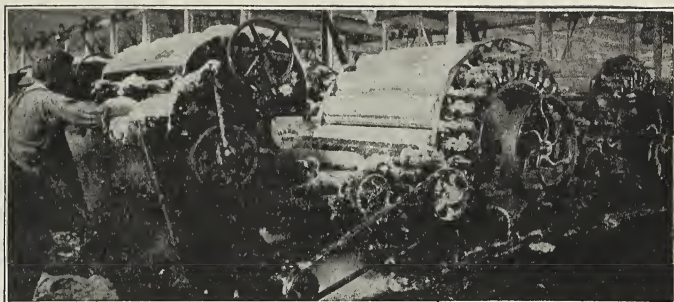
Fig. 90. Great weaving machines make our cloth.

could be used for making woolen as well as cotton cloth. Then many woolen mills were built, and soon the young women were working in the factories instead of spinning and weaving by hand at home. For a time the farms of New England furnished enough wool for the mills, but now the most of it comes from farther west.

Some of it comes from as far away as Australia. Lawrence is an important city in the worsted manufacturing industry and has some very large textile, or weaving, mills.

Suppose we trace the wool from the sheep to a coat. If a barber has ever used an electric clipper to cut your hair, you can imagine what happens to a sheep when it loses its warm fleece in five minutes by means of one of these clippers. These fleeces are tied up, one by one, and packed in bales (Fig. 97).

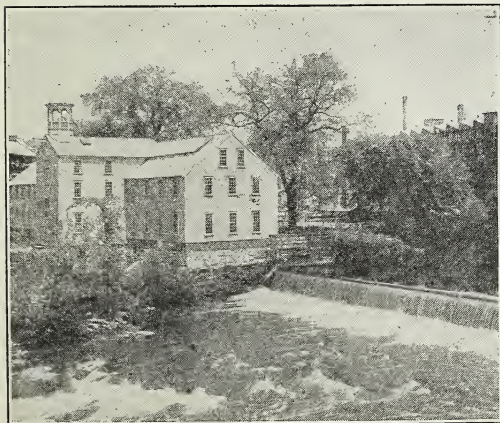
Each fleece has at least two lengths of fiber, long and short. At the mill a sorter tears the fleece apart, putting each kind of wool in a pile by itself. When sorted, the wool goes into a washing machine where it is washed through three or four vats of warm,



Courtesy American Woolen Co.

Fig. 91. A wool-carding machine

soapy water until all the grease and dirt are out of it. It is then carried to the drying room where it is dried. From here it is blown through pipes to the carding room. There it passes between rollers covered with fine, needle-like wires which stick out in all directions (Fig. 91). These needles make the fibers into coarse soft strands or threads which are wound upon large wooden spools. These soft strands now go to the combing machine, where they are made into the size thread desired, and wound into balls. The thread is then woven into cloth, ready for the factories where our suits and dresses, carpets, blankets, etc., are made.



Courtesy Pawtucket Chamber of Commerce

Fig. 92. The little textile mill that Slater started at Pawtucket. Look at Figure 94, page 64.

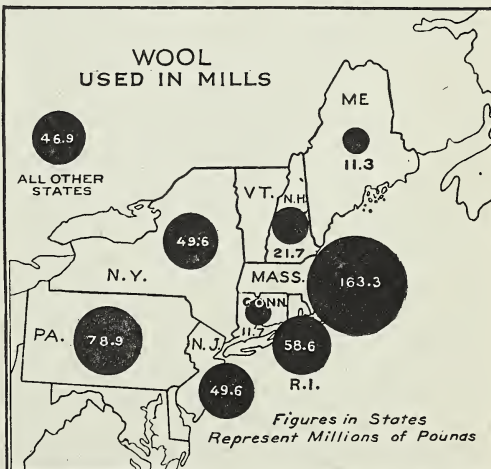
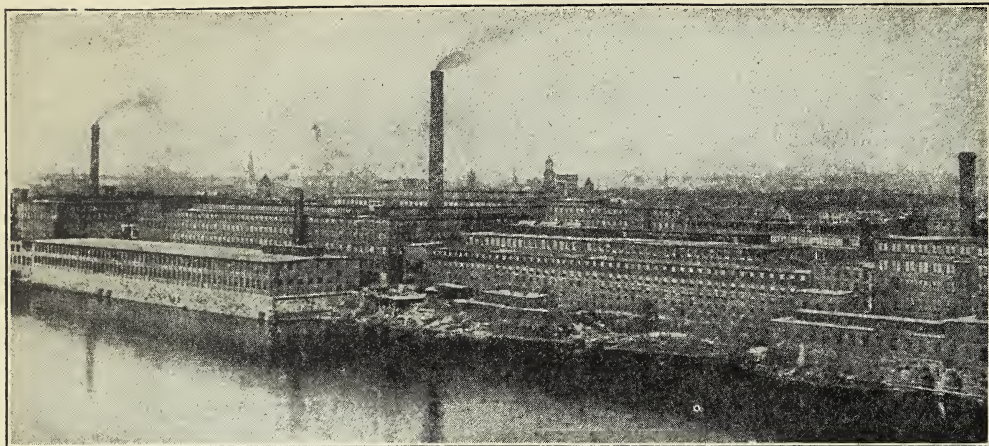


Fig. 93. How many million pounds of wool does Massachusetts use? What is the next greatest wool-manufacturing state?



Visual Education Service

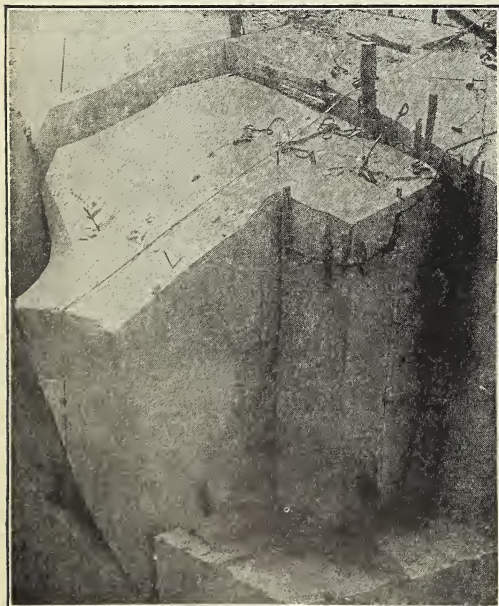
Fig. 94. Great textile factories at Lawrence. Think of the number of people who work in these cloth mills! And there are many, many others like them in New England.

Shoes. You remember that in the Puritan village the cobbler used to come to each home once a year and make all the shoes for the family. In 1750 John Dagys came to Lynn, Massachusetts, to live. He was such a good

shoemaker that people from all around began to come to his shop to have their shoes made. After a while it became the style for people to go to the shoemaker instead of having him come to them. This, then, started another kind of factory. Today, Lynn is noted for the manufacture of women's fine shoes, Haverhill for women's shoes, and Brockton for men's. These cities turn out a large part of all the shoes manufactured in the United States. There are nearly 132,000,000 people in the country. They buy many shoes every year. You can see, then, that the shoe industry is very important.

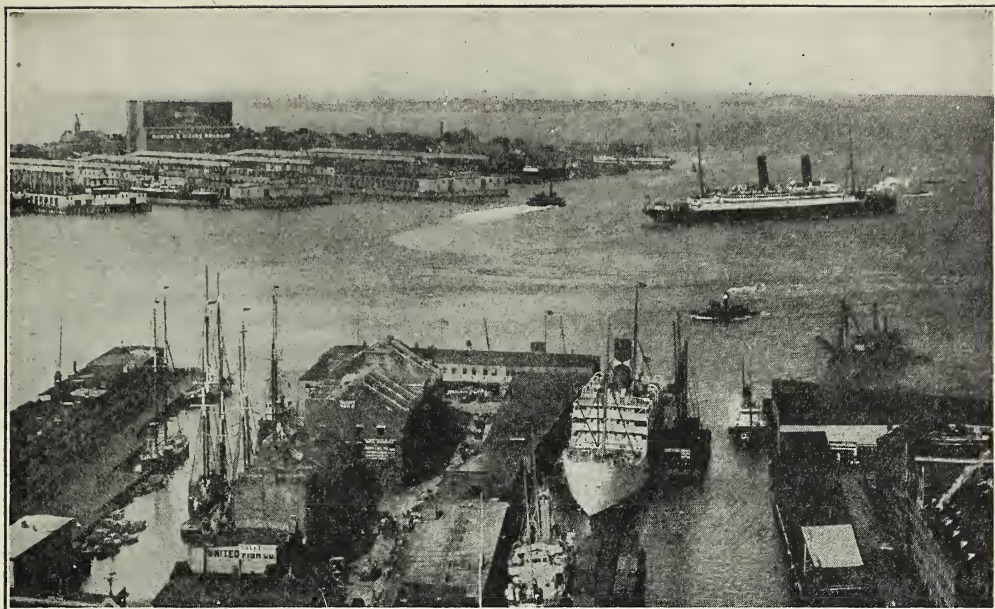
Granite and marble. In New England most of the rocks are in the way, and the farmers would be glad to get rid of them. But three kinds, granite, marble, and slate, are valuable. Whenever you hear the word granite, you think of something strong and lasting. It is so strong and so lasting that it is used for fine buildings and monuments. New Hampshire is called the granite state because so much granite is quarried there.

Much granite, marble, and slate are found in Vermont, also. The finest marble is pure white, with veins of delicate coloring running through it. Marble takes such a high polish



Courtesy Boutwell, Milne and Varnum

Fig. 95. Quarrying a great slab of granite.



© Cunard Line

Fig. 96. The busy harbor of Boston, the greatest trading city of New England, and one of the great sea-ports of the world. The Puritans were wise when they chose this fine harbor for a settlement.

that it is used for inside finishing in the finest buildings. Vermont produces more marble than any other state.

Trading. Did any of you girls ever trade dolls? In the old days when people needed articles they did not have, they traded the things they had to someone else for the articles they needed. People had very little money then; in fact, there was not much in the country. When the settlers first came to America, they traded bright beads and other trinkets to the Indians for furs. The furs were sent to England and traded for the goods which the settlers needed.

Now we have come to use the word "trading" to mean buying and selling for money, as well as exchanging one article for another. The business of trading grew with the New Englanders. The land was poor for farming, but there were swift-flowing streams to run machines for making things, many fine harbors for the ships that were to carry things, and plenty of lumber for building the ships.

Soon the New Englanders were making many more articles than they themselves could use, and they were selling them all over the world.

Did you ever hear of a Yankee tin-peddler? He was usually someone near a factory town, perhaps a small farmer, who would load a wagon or a sleigh with tinware for the kitchen and other notions for the farmer's wife and peddle his wares from house to house. He traded them for dried apples, herbs, grain, skins, rags, or anything the farmer had to spare. Then he would return to the city and trade or sell these articles for the things he needed.

Much later, men began to peddle drygoods of all kinds. These peddlers were mostly Germans, Jews, Syrians, and Armenians, who brought shawls, laces, and other fine goods from Europe. They were called pack-peddlers, because they carried their goods in packs on their backs. Until better roads and railroads were built, much of the trading in



U. S. Department of Agriculture

Fig. 97. Bales of wool in the warehouse at Boston

the country districts of New England and New York was done by peddlers. The pack-peddlers were a little different from the tin-peddlers who traded one thing for another. The pack-peddlers sold their goods for money.

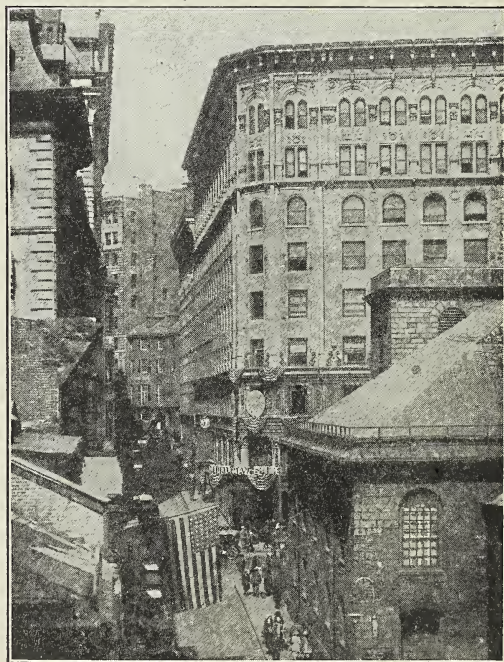
Boston—a great trading city. Trading today is done quite differently from what it was then, as you know. Now trucks and railroads carry the goods back and forth, and the cities are centers for trading or marketing. Boston is New England's largest city and is sometimes called its hub. Look at the hub of a wheel, and see how the spokes go out from it in every direction. With her steamship and railroad lines running in all directions, Boston has a right to her nickname.

Some of the oldest spokes in Boston's hub are the steamship lines running to all parts of the world. To Boston large ships bring wool, sheepskins, cowhides, kangaroo hides, and rabbit skins from far-away Australia; hides from Argentina; rubber and coffee from Brazil; sugar, bananas, and tobacco from the West Indies; cotton and fruit from the South; tin from Bolivia; petroleum from Mexico and Venezuela. Out from Boston in these ships go the products of our country to the other countries of the world. Do ships not go to other New England ports, you ask? Yes, but Boston is the center of the ocean trade for New England.

The railroads, too, are very important spokes in the hub. They bring grain and flour

from our Central States; iron and coal from Pennsylvania; copper, gold, and silver from the Western States; cotton from the South; and other raw materials from other sections. The companies whose mills and factories are in the smaller towns have offices in Boston. Here they buy the wool, cotton, iron, and other materials that their factories need.' 'So you see why Boston is a great buying and selling, or trading, city.

You may wonder why New England should do so much manufacturing when it has so little raw material (wool, cotton, metals, etc.) from which to make things. There are four reasons: First, it had the water power; second, its people invented so many things; third, it started making the articles invented before other parts of the country did; and fourth, it now has the most skilled workmen.



© Keystone View Co.

Fig. 98. Many of the streets in Boston are narrow and winding. The Pilgrim Fathers could not know what a great city Boston would be; so the streets were not made for the needs of a busy, crowded city.

A TOURIST RAMBLE

Let us imagine that our school work for the year is finished, and we are going to spend a vacation in New England. Suppose we take a boat from New York City and sail through Long Island Sound to Newport, Rhode Island, at the entrance to Narragansett Bay. That city is the fashionable summer resort for the society people of the large cities. After we have seen the beautiful homes of the millionaires, we sail on up the Sound to the island of Martha's Vineyard for a day or two. We then continue around the point of Cape Cod to Provincetown and leave our ship.

Why not take an automobile ride along the shore of Cape Cod Bay to Plymouth where the Pilgrims landed! We think we can almost see the Pilgrims as they carried their few belongings up the little hill that cold December day. Should they stand on that hill with us today, they would not see log cabins at the edge of the woods with a few corn fields close by. All about are fine homes, big hotels, good roads, and many playgrounds.

Suppose we take a boat at Boston and go to the coast of Maine. Along the Maine coast are islands, bays, and coves, so many that we can hardly count them. In Penobscot Bay we find one island which we may have all to ourselves. We set up our tent and enjoy the quiet, the cool sea breeze, the boating and swimming, and the beautiful scenery about us. Let us load our tent and fishing tackle into a canoe, and paddle up the Penobscot River. We paddle on for several days until we come as near as possible to Mt. Katahdin. We catch sight of a deer as it bounds through the forest. We wade up a clear, sparkling mountain brook, and catch some speckled trout.

Suppose we hike across the country to the White Mountains. There is Mt. Washing-



Courtesy Maine Central Railroad

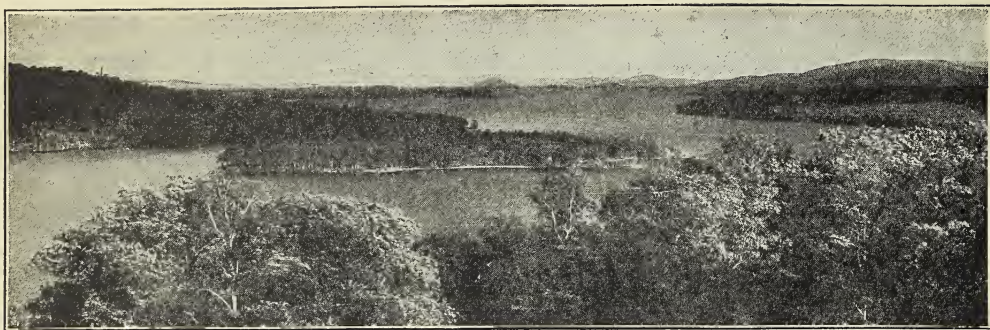
Fig. 99. The Penobscot River and Mount Katahdin

ton, the highest in New England. We could ride to the top, but we prefer to climb. What a fine view of the surrounding country we get. Over to the east, the Androscoggin River winds around the hills and flows on to the sea. Lake Winnepesaukee and many smaller lakes lie away to the south and look like mirrors in the sunlight. Beautiful valleys and hills with farms and towns nestled among the trees lie off to the west. We should like to take a trip westward over the Green Mountains to Lake Champlain, but our time is up. We travel down the beautiful Connecticut River to Long Island Sound, from which we started our trip.

QUESTIONS TO ANSWER

1. Where in New England are the following produced in greatest quantity: potatoes, tobacco, maple sugar, cranberries? 2. Why would you expect New England to have many dairy farms? 3. Why did fishing and ship-building become the first great industries of New England? 4. Tell the story of fishing for cod. 5. How is cod fishing different from mackerel fishing? 6. What cities are particularly noted for fishing?

7. What has become of the forests that covered New England when the Pilgrims came? 8. What is the principal use made of the spruce wood in Maine today? How is it done? 9. Explain "Yankee notions." What are some small wooden articles that might be called Yankee notions? 10. How did the people of New England run the ma-



Courtesy Boston and Maine Railroad

Fig. 100. Beautiful Lake Winnepesaukee in New Hampshire

chinery for their factories? 11. What did Joseph Jenks do that made him a famous man? Name some of the things that he invented. 12. What other metals besides iron did the Yankees improve and invent new ways of using? Explain. 13. To whom does New England owe the fact that there are so many cotton mills in these states? Tell the story. 14. From what animal do we get wool? How is wool made into cloth?

15. Where does New England get cotton for her mills? Wool? Iron? 16. What city is the great leather market for New England? What cities make shoes for us? 17. Does New England raise enough cattle to furnish all the leather for her shoe factories? Where does the leather come from? 18. Name some things that are made of each of the following materials: iron, cotton, wool, leather. 19. How is wool clothing different from cotton clothing? How is leather different from rubber?

20. What stones for building are quarried in New England? Tell what you can of how each kind of stone is different from the other. 21. Name some things that are used to take the place of stone in building today. 22. Explain how trading started. What is the great trading city of New England? Why? 23. Give four reasons why New England makes so many things to trade.

THINGS TO DO

1. On an outline map of New England write in their proper places where the following are produced in greatest quantity: potatoes, tobacco, maple sugar, cranberries. Print the names neatly. Do the same with marble and granite.

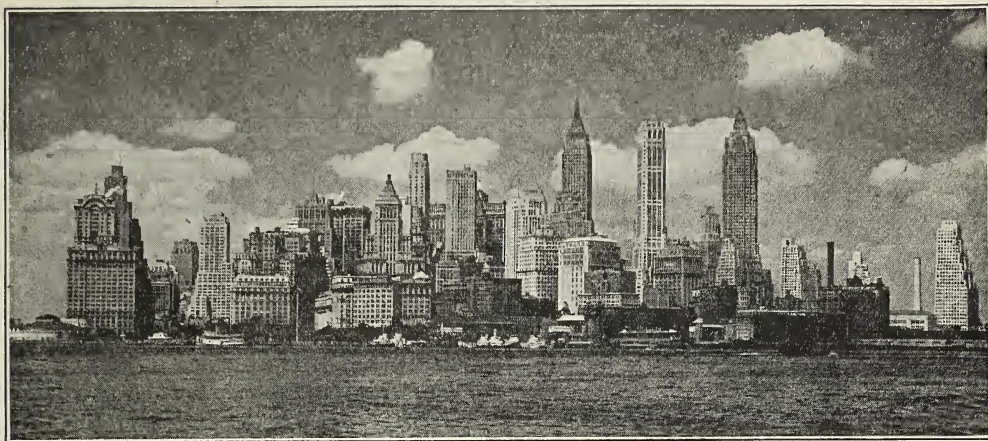
2. Turn to the list of cities (page 465) and find

five of the largest cities in Massachusetts and two in each of the other states. Locate them on the colored map. Now place a dot in the proper place on your outline map. Write the first letter or enough of the name to show what each city is. Be able to tell for what each city is noted. Draw the proper railroad lines that run through these cities to Boston. Draw a few lines out from Boston into the Atlantic Ocean with arrows at the ends to show that goods are shipped to other countries. Draw three other lines with arrows pointing to Boston. Be able to tell what goods are shipped out and also what goods are shipped in.

3. Write a little story telling why Boston is called the "Hub of New England."

4. In newspapers and magazines find advertisements of New England cities, products, and vacation resorts. Bring them to class and make a report on what they say about New England. 5. Draw from memory the best outline map you can of New England. Be ready to do this on the blackboard.

Books to read: Allen, *Geographical and Industrial Studies, United States*, pp. 293-317; Barrows and Parker, *United States and Canada*, pp. 173-188; Brigham, *From Trail to Railway*, pp. 1-13; Carpenter, *The Clothes We Wear*, pp. 20-24, 43-49, 129-133; Carpenter, *North America*, pp. 95-125; Dorrance, *The Story of the Forests*, pp. 16-31; Jordan and Cather, *Highlights of Geography*, pp. 13-16, 85-89, 132-135, 226-229; Lefferts, *Our Own United States*, pp. 10-30; Pitkin and Hughes, *Farm and Field*, pp. 1-49, *Mill and Factory*, pp. 270-286; Smith, *Human Geography, Book II*, pp. 128-135, 160-161; Southworth and Kramer, *Great Cities of the United States*, pp. 141-172.



Ewing Galloway

Fig. 101. This is the sight that would greet Henry Hudson if he could sail into New York Bay today.

THE NEW YORK AND DELAWARE BAY REGION

THE DUTCH AND THE QUAKERS

HENRY HUDSON AND THE "HALF-MOON"

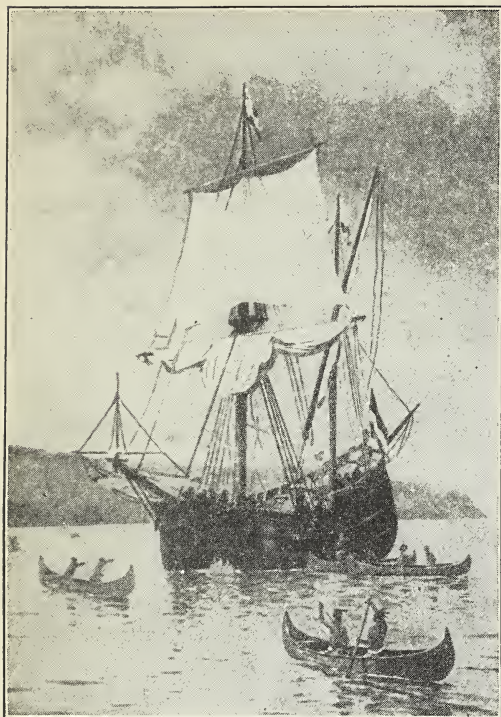
The coming of the *Half-Moon*. We now come to the third doorway through which colonists entered our country in the early days to make settlements. The first doorway was Chesapeake Bay; the second, Cape Cod Bay; the third, New York Bay and Delaware Bay, a double doorway, and the one we shall now study. People came to this new and free land for different reasons. The first Virginians came to America to get rich quickly by digging gold, and to look for the Northwest Passage to India. The Puritans came to make their homes where they could worship God as they pleased.

The Dutch came to the new land to trade. They had long been famous for their trading all over the world, and they were the most anxious of all the nations to find a short-cut to India and China. So they hired Henry Hudson, an Englishman, in his little sailing vessel, the *Half-Moon*, to search for the passage. Hudson anchored the *Half-Moon* in New York Bay in 1609, just two years

after the Jamestown colonists landed. Into this harbor flows a river four miles wide at its mouth. Hudson tasted the water and found it salty; so he felt sure that it must flow from some other ocean. "Here at last is the waterway to China," he said.

Hudson lost no time, but steered his little ship into this river and sailed north about one hundred fifty miles. The water was still salty, for the tides push the sea water up as far as the present city of Albany. Finally he came to where another river, the Mohawk, flows into the Hudson. Here he had his sailors dip up some water. "It is not salt, but fresh," said Hudson. "We have come to the end of tidewater. This is not the way to the Pacific, as I had hoped." He turned his vessel about and started back. On the map (page 80) find New York Bay, the Hudson and Mohawk Rivers, New York, and Albany.

Delaware Bay. As they glided along, Hudson enjoyed the beautiful scenery, as thousands of others have enjoyed it since that day. He sailed past heavy forests, the blue



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Fig. 102. The *Half-Moon* anchors in New York Bay.

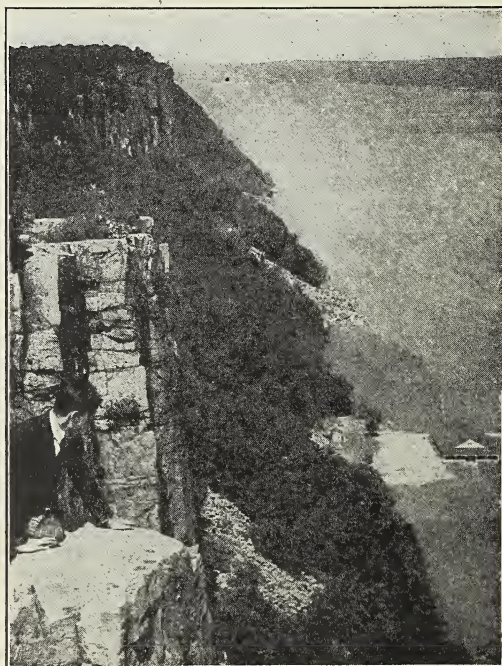
Catskill Mountains, and the beautiful Palisades (Fig. 103). "It is as fair a land as was ever trod upon by the foot of man," said Hudson, "but it is not the way to China." He then sailed down the coast of what is now New Jersey, into Delaware Bay, and up the Delaware River. He was still looking for the short-cut to China, but here again he came to fresh water and turned back to the ocean. Hudson returned to Holland with the *Half-Moon*, and then went to his home in England. Later the English sent Hudson to the northern end of America to see if he could find the Northwest Passage. He did not find the passage, but he did find a great body of water which he named Hudson Bay. Find it on the map of North America.

Here in these cold northern waters Henry Hudson met a sad death. After a winter

amid the desolate ice and snow, Hudson's sailors rebelled against exploring any farther. When they saw that he was determined to go on, they set him adrift in a small boat. With him were his little son and two or three friends. They were never heard of again.

DUTCH TRADERS AND SETTLERS

Dutch trading posts. When Hudson made his report in Holland, many of the Dutch were eager to come to the new land. Some did come; but they did not make any settlements until five years later, 1614, when they settled Fort Orange, now Albany. In the same year a Dutch captain explored Long Island Sound and sailed up the Connecticut River. So Holland claimed all the land between the Connecticut and the Delaware Rivers and named it New Netherland. The Dutch built another fort or trading post on Manhattan Island where New York City now stands, and soon the Indians and trap-



© Keystone View Co.

Fig. 103. The Palisades of the Hudson



From a drawing by a Dutch captain

Fig. 104. Fort New Amsterdam in the days of the Dutch

pers were bringing great loads of furs down the Hudson, which the Dutch ships took across the ocean to Holland. There was so much money to be made from buying and selling furs that more and more traders came to Manhattan Island.

First Dutch colonists. The first Dutch people who intended to make their homes in New Netherland came in 1623, and in 1625 Peter Minuit was sent over as governor of the new Dutch colony. He bought Manhattan Island from the Indians for about twenty-four dollars worth of beads, cloth, and trinkets. Here he built Fort Amsterdam, and around the fort grew the town of New Amsterdam, the beginning of New York City.

The first colonists had only small farms and made their living partly by trading with the Indians. The Indians on the northern end of the island troubled the Dutch; so they built a wall across the island to keep them out (Fig. 106). Wall Street, the money center of the United States, is just where that wall was built.

How different the money now handled on Wall Street

from that which the Indians were using when the Dutch came! The Indians cut purple and white beads from the clam shells they found in Long Island Sound, and then wove the beads together into strands, or belts, and called it "wampum"; this was their money. The traders bought this wampum from the Indians for a few trinkets, and then used it for buying furs from the Indians up the river.

Peter Minuit, the Dutch governor, offered a large piece of land on the banks of the Hudson to any Dutchman who would come and bring fifty people with him to settle. The land on either side of the river was fine for farming, and the owner could rule his little colony about as he pleased. A number of wealthy Hollanders came and settled their colonies, or estates, along the river all the way from New Amsterdam to Fort Orange. Such men were called "patroons." Each year the tenants, or workers on the estate, gave the patroon a share of their crops as rent for the land.

Other settlements. A few years later a colony from Sweden settled in what is now

**Fig. 105. Peter Minuit buys Manhattan Island for \$24.**



Fig. 106. Wall Street, New York City, 300 years ago

the state of Delaware. Gustavus Adolphus, king of Sweden, was one of the most important rulers of Europe at that time. He had heard about other nations having colonies in America, and he thought that his people should have some of this new free country; therefore he granted the land along Delaware Bay and River to a colony of Swedes. Here they started a little settlement and named it Fort Christina. This was the beginning of the city of Wilmington, Delaware. But the Dutch soon took this land away from Sweden.

Life in an early Dutch home. The homes and the life of the early Dutch settlers were different from those of the Virginians and the Puritans. Some day you will read about them in the stories of "Rip Van Winkle," "Legend of Sleepy Hollow," and *Knickerbocker's History of New York*.

The Dutch houses were built of logs, lumber, or stone, according to the wealth of the owner. The patroon's home was usually of stone or brick. The roofs were steep, and there was often a weather vane on the peak of the roof, usually a little red rooster, that turned with the wind so that the farmer could tell which way the wind was blowing. The doors were divided into two parts, upper and lower, and had iron or brass knockers on them. The windows were made of small,

square glass panes. The floors were covered with a layer of clean, white sand.

Let's pretend we knew a Dutch colonist, Heer van Horn. He wore baggy trousers, a loose cap, and buckles on his shoes. In cold weather, he wore more trousers. On holidays he wore a long coat with brass buttons on it, and trousers of bright blue, yellow, or purple. His wife, Vrouw van Horn, wore very full petticoats and

skirts, and put on one over the other until she looked like a walking balloon. From her waist hung strings with pin-cushions, scissors, and needle books at the ends so that she could take up her sewing at odd times. She was never idle. She scrubbed the floor, and scoured the pots and pans until they shone. Why do not the women today do so much sewing as in those days?

The Dutch people liked flowers and plenty of good things to eat. There was always a flower garden in front of the house, and a vegetable garden at the back where they grew their cabbages, beets, turnips, and other good things to eat. They used maple sugar and molasses to sweeten their doughnuts and other cakes. These things, with plenty of meats, kept our Dutchman fat and hearty.

The trail to New Amsterdam. Why did the Dutch traders build their trading posts at Fort Orange and New Amsterdam? They had a reason, for trading was their business. They knew that they must build their posts along, or at the end, of some trail; then it would be easy for them to get into the Indian country and for the Indians to carry furs to them. Let us see, by following the adventures of two imaginary Dutch boys, Hans and Peter, what this trail was that led to New Amsterdam, where ships sailed with the furs to Holland.



Courtesy Lehigh Valley Railroad

Fig. 107. Lake Cayuga, one of the Finger Lakes of central New York

Hans and Peter lived on a farm near where Poughkeepsie now stands. The boys often saw Indians and trappers paddle their canoes loaded with furs past their home down the river to New Amsterdam. They knew that the Indians came from the country away to the west beyond the Catskill Mountains, the "Sky Land" the Indians called it. "Some day," said Hans, "we will go to see that country, and buy furs from the Indians."

The land of the Iroquois. Now this land which stretched from the Hudson River to Lake Erie belonged to five tribes of Indians—the Mohawks, Oneidas, Cayugas, Onondagas, and Senecas; and the tribes together were known as the Iroquois, or Five Nations. Later the Tuscaroras joined them, and then they were the Six Nations. Some of the beautiful Finger Lakes in central New York are named for these different tribes. Turn to the map (page 80) and locate the lakes.

Early one spring morning Hans and Peter set off up the Hudson for the land of the Iroquois. For three days they paddled north up the river. Trappers and traders hailed them now and then. They passed a few clearings along the river bank and the fine house of Heer Van Rensselaer. Then they came to Fort Orange. On north they went to the mouth of the Mohawk River where the busy city of Cohoes now makes use of the water power from the falls in that river. The boys carried their canoe around the falls and

paddled westward up the Mohawk for two days. They were now getting into the heart of the Indian country. The third day they came to another falls. Here, many years later, was to be the city of Little Falls. Can you guess why a city should be located here?

The Indian "long-house." This was in the country of the Mohawk Indians, and soon our traders came to an Indian village. There were three long-houses near together with a high palisade or fence all around as a kind of fort. An Indian brave was standing near one house. The boys told him by signs and a few Indian words that they had come to buy furs. The Indian, whose name was Lone Wolf, took the boys into the long-house. The long-house was made by sticking strong poles into the ground and bending them together at the top. This framework was then covered with bark. Six families lived in this long-house. The rooms were curtained off with skins, and each family had a room to itself. Three fires burned in the long hall which ran down the middle. The smoke from the fires went out through openings in the roof.

Lone Wolf's mother asked the boys to stay for the night. For supper they had a strange dish of corn and beans cooked together. You have probably eaten it many times without knowing its real Indian name—"succotash." When the men and the two Dutch boys had eaten, the squaws and the children ate what food was left.



Fig. 108. The Mohawk River cuts its way through the hills of New York.

When the boys had bought furs from these Indians, using wampum for money, they moved on up the river. They slept under the open sky in rough and strange places many nights and fought off the wild animals with fire and gun. They did not always find Indians so friendly as Lone Wolf's family had been. But most of the Indians were friendly, for they saw white traders quite often. Day by day the boys added to their furs; they had a bear skin, a few mink, and many beaver.

The return. One night the boys tied up all their furs and found they had a large pack. "That is about all we can carry," said Peter. "Yes," said Hans, "and our wampum is about gone, too. So we may as well start for home." "And the sooner we get off the better," said Peter, "for the Indians around here are not so friendly. You know how cross Chief Running Bear was today when I told him I had no more wampum. Let's slip away tonight after dark, and be on our way home before daylight." So that night the boys slipped quietly down to the river, loaded the furs into their canoe, and paddled away from Running Bear's village.

The boys made better time going back than they had made coming, for it was easier to float down the river than it was to paddle up stream against the current. When they came to the falls of the Mohawk, they had to make several trips to carry their big load of furs

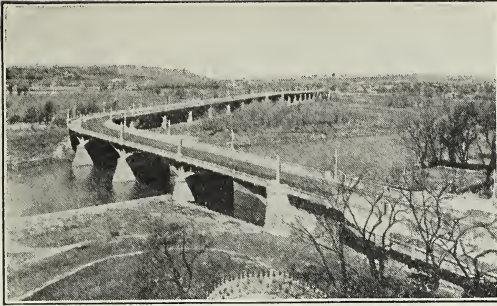
and the canoe around the falls. This done, the rest of the journey was easy. Can you not imagine how glad Hans and Peter were to see home again, the house with the little red tin rooster turning merrily on the roof?

These boys had traveled up the famous Hudson-Mohawk trail that connects Lake Erie and the West with New York City. We shall learn more about this famous trail.

The Indians' Dutch friend. Arendt van Corlear was one of the first Dutch settlers to do a little exploring in central New York. He came to New Netherland and settled near Fort Orange. A few years afterwards he traveled up the valley of the Mohawk River until he reached the chief village of the Mohawk Indians. They were friendly Indians, and Corlear stayed with them several weeks. The Indians liked him and called him their friend. Some years afterwards Corlear bought from these Indians the very land on which stood the village that he had visited. Here he founded one of the first towns west of Fort Orange, and named it Schenectady. The Indians liked Corlear so well that for a hundred years after his death they called the governors of New York "Corlears."

THE DUTCH LOSE NEW NETHERLAND

Governor Stuyvesant. New Amsterdam had four famous Dutch governors, of whom Peter Stuyvesant was the most noted. People



Courtesy Schenectady Chamber of Commerce

Fig. 109. Bridge over the Mohawk at Schenectady called him "Old Silver Leg" because he had a wooden leg with bands of silver around it. Stuyvesant ruled the people just about as he pleased. The patroons complained to Holland, and Stuyvesant allowed them to select nine men to help him govern. But the old governor did not intend to follow anyone's advice unless it agreed with what he wanted to do, and soon the colonists were again complaining to the government at home. Finally the home government passed laws that gave the colonists some rights. After that, settlers came from several other countries. It is said that in 1643 eighteen different languages were spoken in New Amsterdam.

But Governor Stuyvesant still tried to have everything done as he wanted it, and he had much trouble with the settlers. Then, in 1664 an English fleet came into the harbor to take the city. The English said that all this land from Virginia to New England belonged to them. Brave old Governor Stuyvesant stamped his wooden leg and would not surrender, but the settlers disliked him so much that they would not fight. Since he could not fight alone, he had to surrender the city.

The English then changed the name of the city and of the colony to New York, after the Duke of York, the king's brother. The king had given the Duke of York all the land between the Connecticut and the Delaware. The Duke gave two of his friends, Berkeley and Cartaret, the part of his land that lay between the Delaware and the ocean. This was

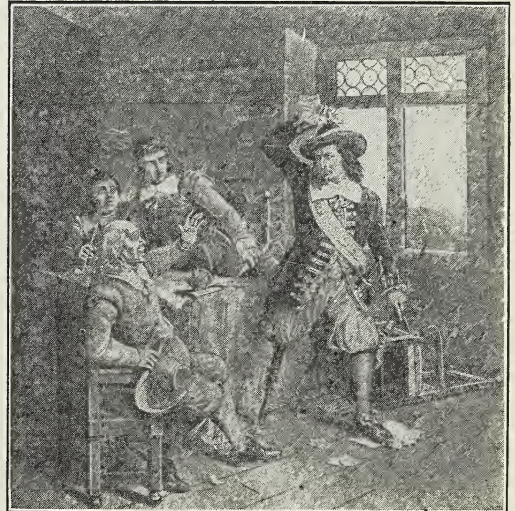
named East Jersey and West Jersey. It was the beginning of our state of New Jersey.

THE QUAKERS AND PENNSYLVANIA

The Quakers. The Puritans came to America so that they could worship as they pleased; yet they wanted to make everyone who came to New England worship their way. They drove out Roger Williams, you remember, because he disagreed with them. Lord Baltimore founded Maryland so that he might bring the unhappy Catholics in England to a place where they could have religious freedom. We shall now learn about another people, the Quakers, whom William Penn brought to America that they might live in peace in their religion.

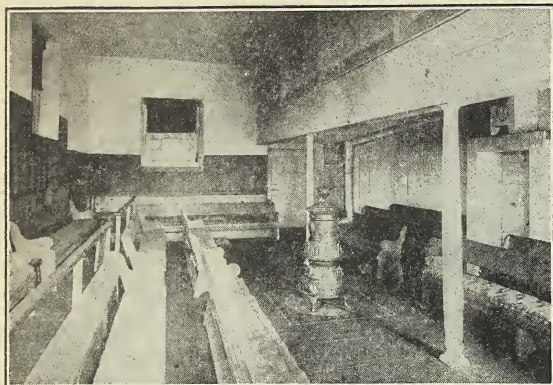
William Penn. William Penn was the son of an admiral in the British navy. Admiral Penn was not only well-known as an officer in the navy, but he was wealthy and a friend of the king. He was very proud of William, and hoped that he would some day become a great man. The boy did become great, but not in the way that his father had hoped.

William was a fine-looking boy, with large eyes, and dark curly hair that reached to his



From the painting by Powell

Fig. 110. Peter Stuyvesant refuses to surrender.



Courtesy Wm. H. Wise & Co.

Fig. 111. Penn's meeting-house

shoulders. When he was seventeen years old, his father sent him to Oxford University, where he did well for two years. Then he became a Quaker and was expelled from the university because of it. The Quakers had many beliefs and customs that the king and his officers thought were queer and wrong. They called Sunday the first day of the week, Monday the second day, and so on. The house in which they met on Sunday was not called a church; it was just a "meeting-house." They believed that the church service should be very plain and quiet. They usually had no preacher, but sat in silence until someone felt that he must talk. They said the spirit of God moved them to talk. They thought that it was wrong to go to war, because the Bible says not to kill. They believed that all men are equal; therefore they would not take off their hats to anyone, even to the king.

The new colony of Pennsylvania. When William was twenty-six years old, his father died. At the time of Admiral Penn's death, the king owed him about \$80,000, which money was to be given to William. Now William was anxious to get land in America for the Quakers; so he asked the king to give him land in the new country as payment of this debt. The king was pleased at this suggestion because giving land that had cost him nothing would be an easy way of paying the

debt; so he gave William Penn 40,000 square miles of land west of the Delaware River. This land was all woods, like most of the land at that time. The king named it Pennsylvania, Penn's Woods. William told the king that he did not want to honor himself in that way, but the king said, "I am not honoring you, but your father." So the part of the country in which Penn and his Quakers settled was the beginning of the great state of Pennsylvania.

In 1681 three thousand people came to the new land. This was the largest body of colonists that had ever sailed for the New World. Penn himself did not come over until the next year—1682. He had sold the land very cheaply to his friends, and had given them a free government. These people

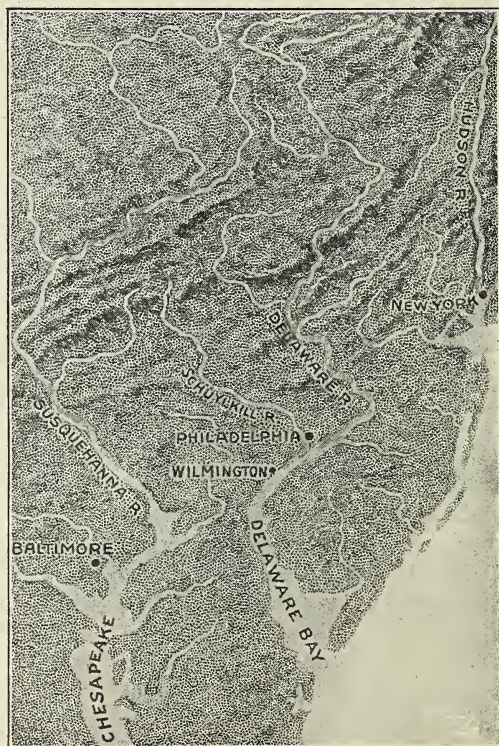


Fig. 112. Where the Dutch and Quakers settled.

were not all Quakers, for Penn had advertised for settlers from other countries. Besides, the Quakers welcomed all colonists, no matter what their religion might be.

Penn's treaty with the Indians. Soon after Penn came, he called the chiefs of several of the Indian tribes together and held a meeting with them near what is now the city of Philadelphia, under a large elm tree where the Indians themselves had met many times before (Fig. 113). They feasted on roasted corn and acorns, played games, and ran races. The Indians were pleased because Penn ate with them. When he jumped farther than any of them, they were sure that he was a great man.

After the feasting and the games, Penn smoked the peace-pipe with the Indians and told them that he wanted to buy some land. They agreed to sell him the land he wanted. The Indians also made a treaty with Penn and said, "We will live in peace with William Penn and his children so long as the sun shines and the rivers run." From then on the Indians loved the Quakers. It was said that Quaker clothing was a better protection from the Indians than a gun. When the Indians liked a white man very much, they would say, "He is like William Penn."

Penn plans Philadelphia. On the land that Penn had bought from the Indians he laid out a city. He made the streets straight and wide, so that the people would not be crowded as they had been in the cities of old England. Penn named the city Philadelphia, which means "brotherly love." In a very few years Philadelphia was larger than New York, and for a long time was the largest city in America. Penn built a fine home near Philadelphia, and so long as he lived everything went well. The farmers raised good crops of wheat, corn, and potatoes and shipped many of these products, as well as furs and lumber, to England. The Quakers did well in the new country, because they had come to stay. Other people were invited to



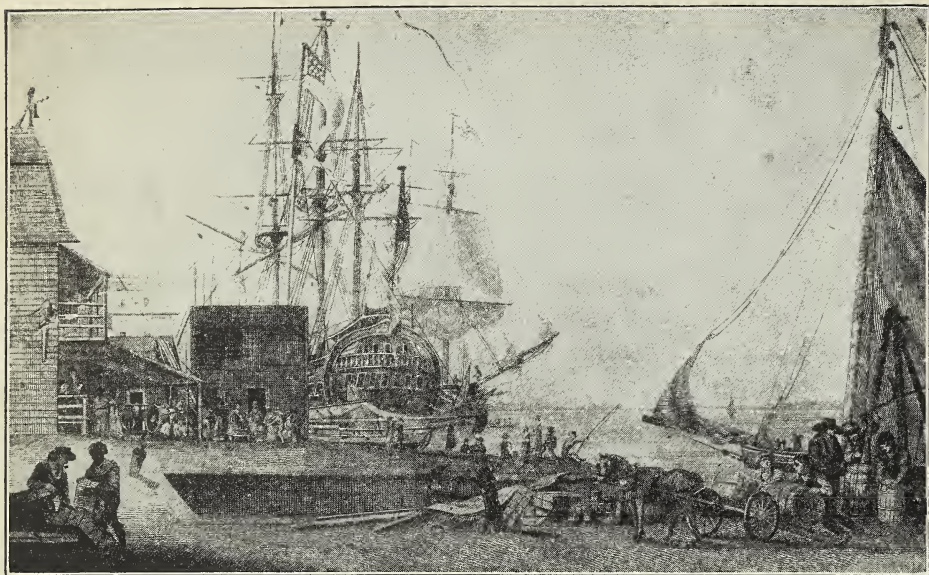
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Fig. 113. Penn's treaty with the Indians

come to the new colony—any who were not treated fairly at home and who wished for a better and freer life. Germans settled at Germantown. Many Scotch and Scotch-Irish came, too, and with the Germans formed a large part of the population. The Swedes who had settled in Pennsylvania before Penn's arrival also became a part of the colony.

When Penn died, his sons and grandsons took charge of his affairs and governed the colony until the War for Independence.

You see that these middle colonies (New York, Pennsylvania, New Jersey, and Delaware) between New England and Virginia were made up of many kinds of people—English, Dutch, Swedes, Scotch, and Germans. Many New England colonists also came down and settled in northern New Jersey. It was a good land in which to settle. The winters were not so cold as in New England, and the summers were not so hot as in Virginia. The soil of the flat Coastal Plain of New Jersey and Delaware was rich and easy to work. The higher, rolling Piedmont of Pennsylvania was also fine for farming. We shall soon learn of other things that made this part of our country grow.



Courtesy Philadelphia Chamber of Commerce

Fig. 114. The water front at Philadelphia in the early days. From this picture what would you think was one of the businesses of early Philadelphia?

QUESTIONS TO ANSWER

1. Tell why Chesapeake, Delaware, and Cape Cod Bays are called gateways to this country. 2. Explain why Henry Hudson at first thought he had found the way to China. 3. On the map of the world find two ways by which Henry Hudson could have sailed from Holland to China. See if you can find two other ways he could use now.

4. Why were Fort Orange and New Amsterdam good places for the Dutch to settle? How is the Hudson River like the James? 5. Tell about making wampum and how the Dutch used it. 6. How can you prove that the Dutch made a good bargain in buying Manhattan Island? 7. Tell the story of Hans and Peter, and of the famous trail from central New York to New Amsterdam. Be ready to show the trail on the map. 8. What was a "patroon"? 9. Tell what the Dutch colonists were like. 10. How were Albany and New York named?

11. Locate Sweden on the map of Europe. Where did the Swedes settle? 12. How did Penn treat the Indians, the Swedes, and other people? 13. How did Penn plan Philadelphia? What does the name mean? 14. Why did the Quakers leave England, and what were some of their beliefs? 15. What people settled New Jersey? Why?

THINGS TO DO

1. On the wall map trace Henry Hudson's visit to this region. Also locate the region claimed by the Dutch. 2. Write an advertisement that a Dutch patroon might have written and posted in the towns of Holland to get people to come to his estate in New Netherland. Sign it with a good Dutch name. 3. Make a little play of New Netherland from the time of Henry Hudson to the time it became New York. 4. Do the same with Penn and Pennsylvania. Use "friend," "thee," "thine," and "thy" instead of "Mr.," "you," and "your." Be sure to wear your hat. 5. Trace the route taken by Hans and Peter.

Books to read: Bourne and Benton, *The Story of America and Great Americans*, pp. 81-87; Davidson, *Founders and Builders of Our Nation*, pp. 22-32; Eckinrode, *Told in Story, Book I*, pp. 85-102; Evans, *America First*, pp. 58-63; Foote and Skinner, *Explorers and Founders of America*, pp. 181-225; Hubbard, *Little American History Plays for Little Americans*, pp. 42-48; Mace-Petrie, *Elementary History*, pp. 65-74; Nida, *Following Columbus*, pp. 204-225; Otis, *Peter of Amsterdam*, Stephen of Philadelphia; Tappan, *American Hero Stories*, pp. 74-108.



James Sawders

Fig. 115. This New Jersey spinach farm is watered by rows of overhead pipes.



U. S. Department of Agriculture

Fig. 116. Cultivating blueberries on the New Jersey Coastal Plain

THE NEW YORK AND DELAWARE BAY REGION TODAY

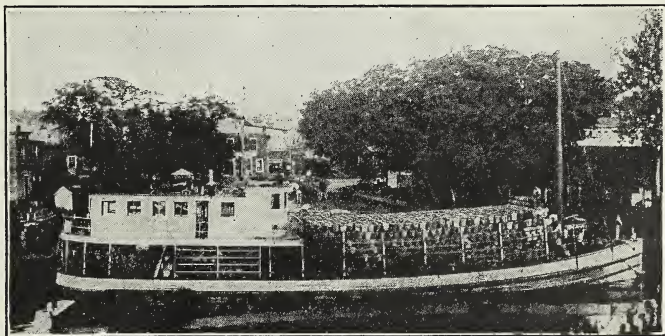
THE COASTAL PLAIN

A garden region. This region around Delaware Bay and New York Bay, where the Quakers, Dutch, and Swedes settled, is the northern end of the Atlantic Coastal Plain about which we have studied. Just about all of New Jersey and Delaware is flat, plain country. But in this region the level plain is much narrower than it is farther south. You remember that in Virginia you can go over 100 miles up the James River before you come to the falls. But in the region we are now studying, the higher, rolling Piedmont country is much nearer the ocean. Wilmington, Philadelphia, Trenton, and Newark are on the inner edge of the plain. You can see that they are not far from the coast. The mountains back of the Piedmont are lower and more spread out than they are farther south. Turn to the maps (pages 76 and 80) and notice where the mountains and highlands lie in this region.

The Coastal Plain is the garden for the many cities in this region. If you should make a map of this region,

and put a dot on it for every bushel of vegetables grown on Long Island, in New Jersey, and in Delaware, you would nearly cover the map with dots. Yet you would have to leave some room for peaches, apples, and berries. Besides, some of the land in New Jersey is used as pasture for dairy cows and some of it for growing grain. This garden spot is the northern part of the Virginia-Maryland garden and has the same rich, sandy soil.

There must be a big garden in this section. You can see from the map that there are many large cities. Just count the cities around New York harbor and in northern New Jersey. All those people must have food. But you know, of course, that this



U. S. Department of Agriculture

Fig. 117. A boat load of tomatoes in Delaware for the canning factories in Camden, New Jersey

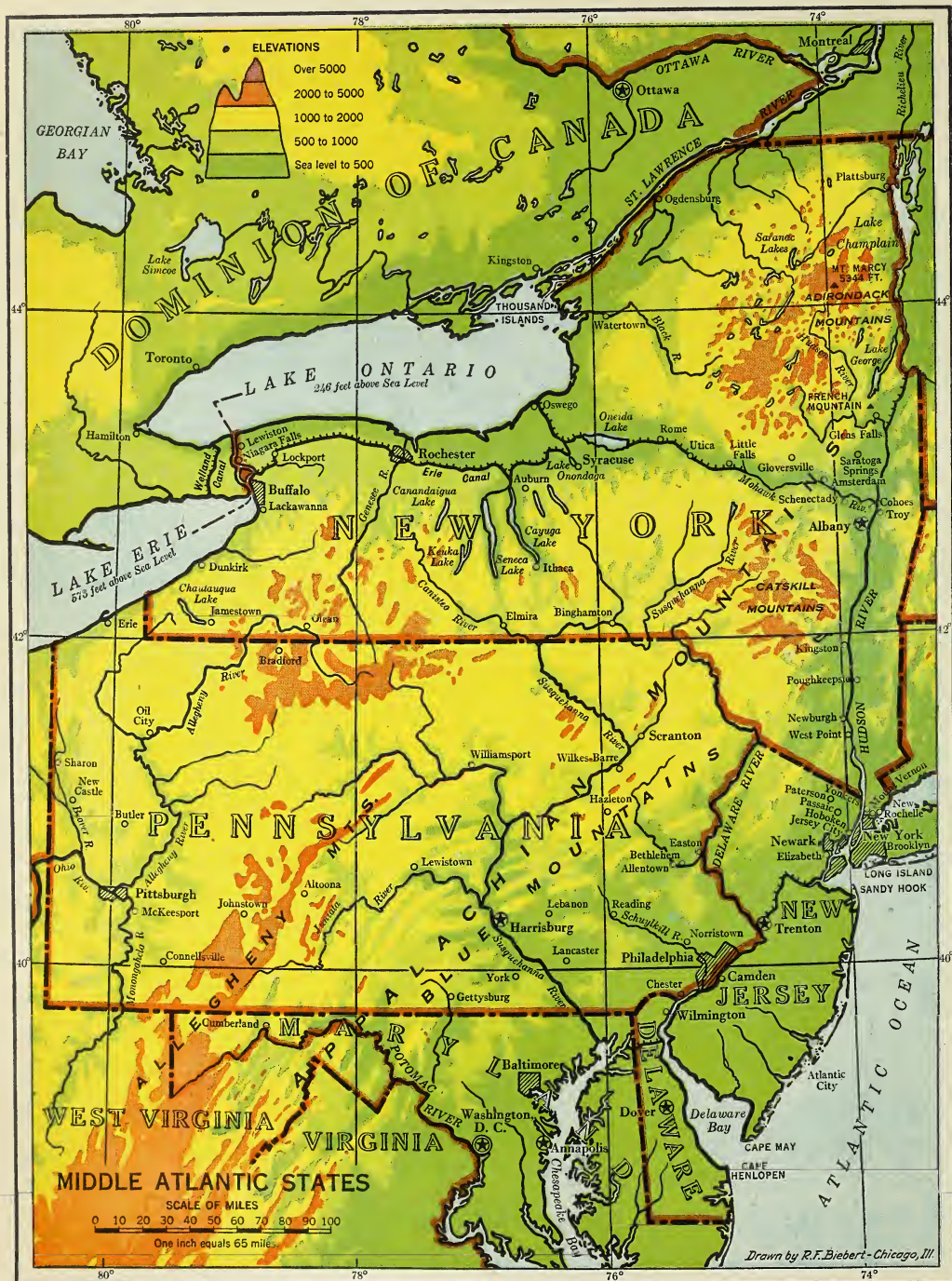


Fig. 118. Map of the New York and Delaware Bay region. We often call these our Middle Atlantic states.

garden region is not big enough to supply all the food for the people of these cities. You have learned of another garden that sends food to these cities. Where is it?

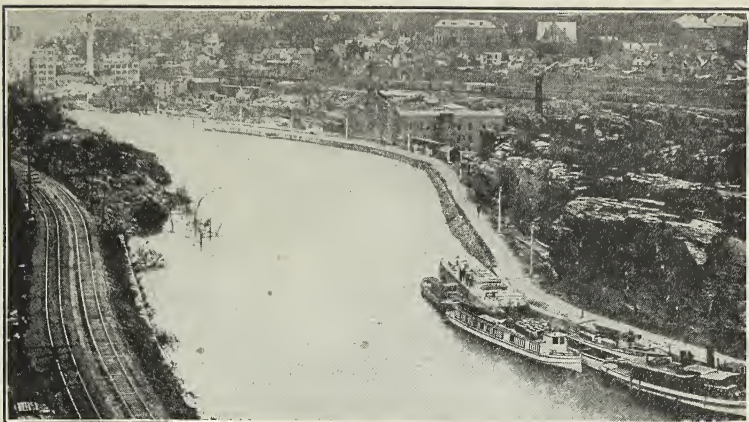
New York, our greatest city. You may know that New York is the largest city in the New York-Delaware Bay region. With other cities so close by that they are really a part of New

York, it is the largest city in the world. Suppose that we learn why New York has grown to such an immense size in such a short time—only 300 years.

We learn that there are four good reasons why New York has grown so large: (1) It has one of the best harbors in the world. (2) The harbor is convenient to the important ports of Europe. (3) The country back of New York produces many things to be shipped to other countries, or manufactured and then shipped. (4) And, the greatest of all reasons, the Hudson and Mohawk rivers and the level road from Lake Erie to the Mohawk, called the Mohawk trail, have made it easy to carry things from the west to New York to be manufactured or shipped away. Is Boston as handy to the goods of the west as New York? Has Boston a large river to bring goods to her door?

THE HUDSON-MOHAWK TRAIL

A highway to New York. Although Dutch and English came up the Mohawk Valley and settled, for nearly 100 years after the time of Peter Minuit the valley was used mostly by the Indians and traders when they carried their furs to New Amsterdam, or New York. The merchants of New

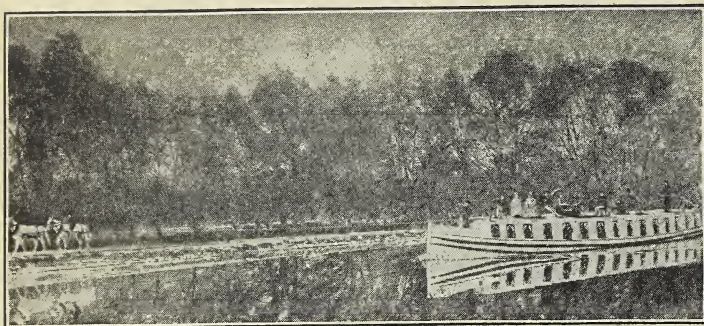


Visual Education Service

Fig. 119. Where the Erie Canal and the Mohawk River flow together. Notice that the railroad follows the valley, too.

York and Albany were making money, and the city of New York was already a prosperous place. And then the Indians around the Finger Lakes and west of the Catskill Mountains began to take their furs down the Susquehanna and Delaware rivers to Philadelphia and Maryland. The New York people were afraid they would lose their fur trade. The merchants said, "We must do something to keep our trade. Perhaps we could build a canal from Lake Erie to the Hudson River and make it easier for the Indians and traders to get their furs to us and for us to get goods to them." The New York merchants did not lose the trade then, as it was easier to take the furs to New York than to Philadelphia. The Susquehanna and the Delaware rivers flow through the mountainous country of southern New York and Pennsylvania; so they are full of rapids and falls.

You see, New York State is nearly all very hilly, and even mountainous in certain parts. These hills and mountains run north and south; so it was a pretty rough journey west from the Hudson everywhere except through the low Mohawk Valley and along the low Lake Ontario plain to Lake Erie. How can you tell from the map on page 80 that there is a level way across New York State?



Visual Education Service

Fig. 120. Travel on the Erie Canal in early days

The Erie Canal. From time to time people still thought of a canal across the state. By the year 1800 settlers had made homes in this country all the way from the Hudson to Lake Erie. Soon after, the Ohio country to the west of New York State was settled, and there was no good way to ship goods to and from these new settlements. To haul a ton of produce from Lake Erie to New York cost \$100. The merchants of New York talked more than ever about a canal.

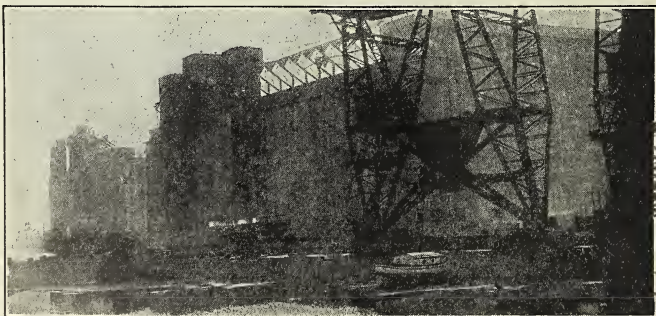
De Witt Clinton, governor of New York State, saw better than any one else what a canal from the lakes to the Hudson River would mean for the business of New York. He talked about the canal and worked for it, until finally in 1817 work on it was started. Thousands of men with picks and shovels and wheelbarrows began to dig a big ditch across the state. Many people laughed at what they called "Clinton's Big Ditch" and said it could never be done. After eight years of hard work the canal was finished.

In October, 1825, Governor Clinton filled two kegs with water from Lake Erie and started on the journey east. Horses on the bank pulled the canal boat at four miles an hour. Cannons were fired along the way to celebrate the opening and to let the people

of New York know that the first boat was on the way. Finally they reached the Hudson and floated down to New York. Governor Clinton poured the two kegs of water into New York Bay and declared that the Great Lakes and the Atlantic Ocean were joined. The canal has since been made larger and improved.

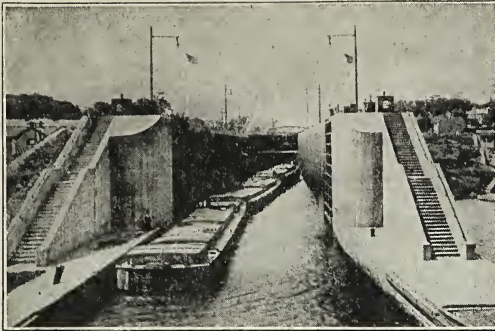
As soon as the canal was finished, the cost of carrying goods from Buffalo to New York dropped from \$100 a ton to \$8 a ton. Wheat, corn, lumber, and furs were shipped by the boatload to the East, and goods the settlers of the West needed were shipped to them. New York City began to grow, and it grew and grew almost as fast as the pot of porridge in the fairy story. People settled along the canal because it was easy to haul goods on it. Many cities grew up. Today this is a thickly settled region.

The Hudson-Mohawk trail today. Railroads have since been built along the same low level. Today they carry most of the freight. Suppose we start from Buffalo and travel along the canal; let us see if we can find what keeps the canal and the railroads so busy. Turn to the railroad map (page 374) and see what rail lines run from Buffalo to New York.



James Sawdiers

Fig. 121. Traffic and grain elevators along the Erie Canal today.



Visual Education Service

Fig. 122. How boats go over hills. The boat enters the lock, the gates are closed, and the water flows in from above until the boat is lifted to the higher level. Then the farther gate is opened and the boat goes on upstream. Now can you tell how the locks work when the boat is going downstream?

At Buffalo we shall need to load several trains with grain, flour, iron and iron goods, hides, meat, and lumber that have been brought to Buffalo by boats on the Great Lakes, or manufactured in Buffalo. To run her factories, Buffalo can get coal and natural gas from Pennsylvania and electric power from the great power houses at Niagara Falls. At Lockport we can see the ten locks by which the boats are raised and lowered up and down the hill (Fig. 122).

Fruit-growing and gardening. All this region from Lake Erie to Syracuse, the Lake Ontario plain, is a garden and an orchard (Figs. 123 and 124). The land slopes gently toward Lake Ontario. As you see by the map, it is not a highland. The cool air from the lake in the spring keeps the buds from starting on the fruit trees until danger of frost is gone. In the fall the air from the lake is warmer than the air on the land, which helps to keep early frosts from freezing the fruit. This is one of the great apple sections of the United States, and the apples are of fine flavor and bright color.



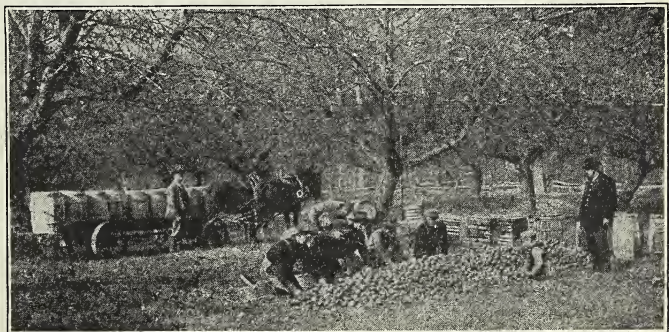
U. S. Department of Agriculture

Fig. 123. Raspberry bushes on the Lake Ontario plain

New York is an important apple-producing state. Pears, plums, and peaches are also grown. Grapes grow best along the shore of Lake Erie, but the shores of several of the small lakes are covered with vineyards.

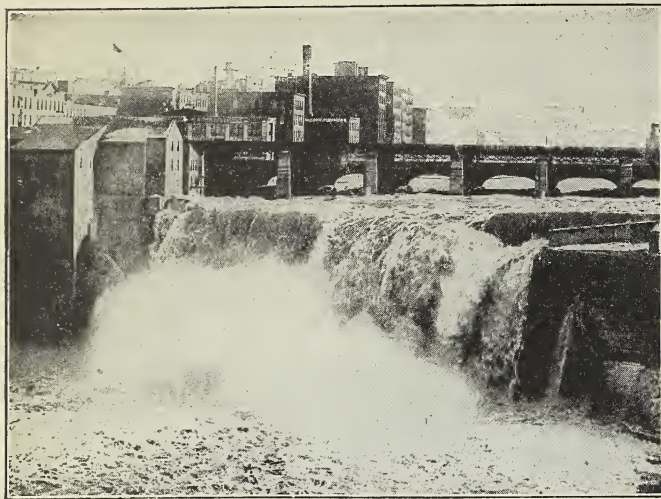
Garden truck is grown in the lowlands all the way from Rochester to Syracuse. Some of the truck farms are so large that they are owned by a company instead of by one man. As tourists travel over the fine roads, they see fruit and vegetable stands where the farmers are selling their produce.

All along the trail from Syracuse to New York we see trainloads of milk rushing over the railroads to feed the people in the cities. The section north of the Mohawk trail to the St. Lawrence River and west of the Adirondack Mountains is a hilly, dairy country which produces milk, butter, and cheese.



U. S. Department of Agriculture

Fig. 124. Sorting and barreling apples in western New York



By Ewing Galloway, N. Y.

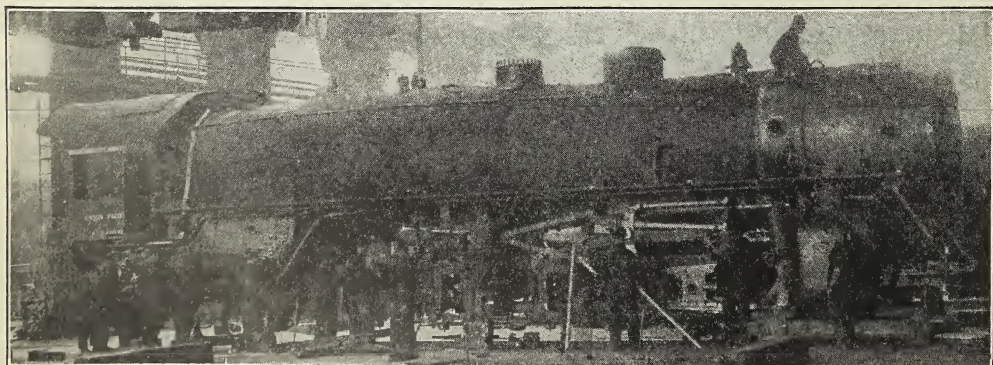
Fig. 125. Colonel Rochester came up from Maryland and started a settlement here. The first settlers planted wheat, and the falls in the Genesee River ran a mill that ground the wheat into flour.

Manufacturing. A number of cities along the Erie Canal are famous for the manufacture of some particular article. Rochester (Fig. 125) is known over the world for cameras. Schenectady is famous for railroad locomotives and electrical machinery. A merchant in Cohoes bought a knitting machine and ran it by water-power from the falls. Knitting factories became the fashion, as more and more knitted goods were used. That

city and several others are noted for their knitted goods. Long ago some Scotch glove-makers settled in this section and a town was named for these makers of gloves. Find it on the map on page 80.

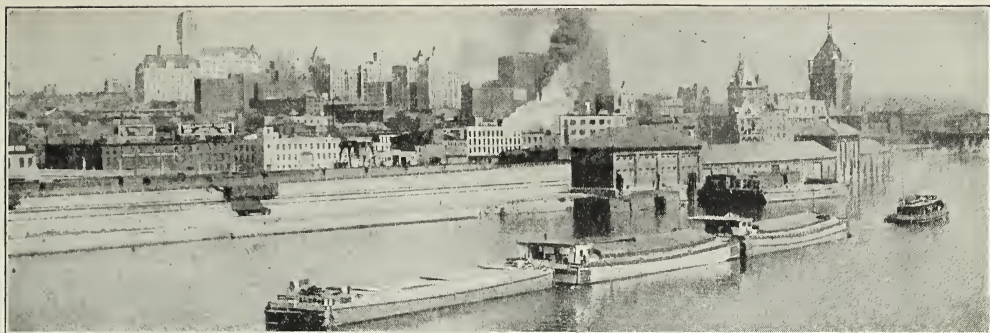
A merchant in Troy noticed that men's shirts had to be washed often when only the collar was dirty. He had his wife make some collars that could be taken off the shirt. They sold so well that he started a factory for making collars and cuffs. Today Troy makes nearly all the collars for the people of our country, as well as great quantities of shirts and underwear.

On the Hudson River where old Fort Orange was built by the Dutch, Albany now stands (Fig. 127). On top of the hill so that it can be seen for miles around is the capitol building, where the business of the state government is carried on. Since the time that our two Dutch boys went on their trip up the river, what changes have taken place! Many boats, large and small, are gliding or hustling up and down the river. There goes a big



Visual Education Service

Fig. 126. At Schenectady are made so many locomotives and so much electrical machinery that the people of the city say, "Schenectady hauls and lights the world."



James Sawders

Fig. 127. The Hudson River at Albany, the capital of New York State

steamboat with three thousand people on it. The boat is named for the Henry Hudson who sailed the little *Half-Moon* up the river that bears his name, on his way to China as he thought. How quiet it all was in Hudson's time, and how busy it is today on the river and along the bank.

Trainload after trainload of freight and passengers are rushing swiftly along over the four tracks of the New York Central Railroad on the eastern side of the river, and the two tracks of the West Shore railroad on the other side of the river. At the stations and piers we see grapes, peaches, pears—just such fruits as we saw near Lake Ontario. Brick and cement works are scattered along the river. There is good clay in this region, and the cities need the bricks that are made from the clay. Great limestone quarries turn out limestone for building and for making cement. Do you wonder that the Erie Canal helped New York City to grow?

QUESTIONS TO ANSWER

1. Why should so much of the Coastal Plain of this region be used for raising food? 2. Use the wall map to help you in giving four reasons why New York is such a large city. 3. Mention several other cities that are really a part of New York.

4. Trace the Hudson River from its source to its mouth. Also the Mohawk. 5. What cities other than Cohoes are near the mouth of the Mohawk? 6. Name some of the Finger Lakes.

7. Locate the Susquehanna and Delaware rivers in New York and trace them to their mouths. Were they as good for boats as the Mohawk and Hudson? 8. Study the map and show that it was easy to dig a canal from Lake Erie to the Hudson. 9. How does a boat get over a hill? 10. Around what falls was the canal dug?

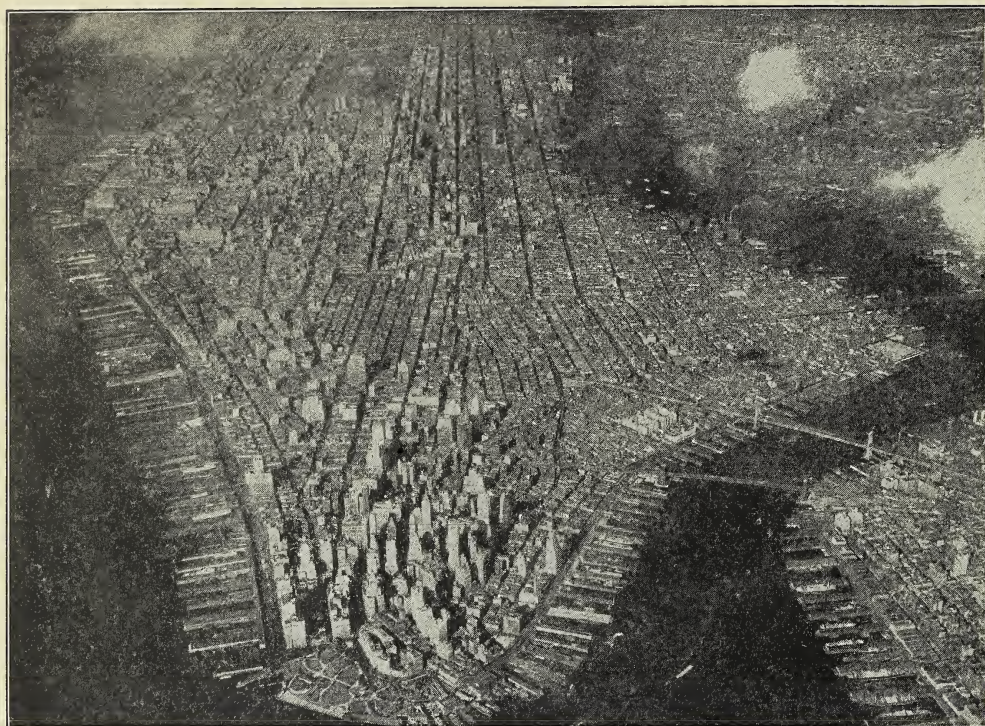
11. What goods were shipped over the canal from Buffalo? Where did they come from? 12. Can you tell why so many towns and cities grew up along the Erie Canal? 13. What goods did the canal carry back to the west? 14. Tell about the garden region in western New York.

THINGS TO DO

1. Draw a line about seven inches long for the Erie Canal; draw one four inches long for the Hudson River in the proper position; connect the Finger Lakes, Lake Ontario, and Lake Champlain. Locate along the canal and the river the cities and towns shown on the map (page 80). 2. Make a bill of lading, or freight bill, for the conductor of a freight train that has gathered up produce and goods at the cities and towns from Buffalo to New York.

3. There are four railroads running from Buffalo to New York that do not follow the Erie Canal. On the railroad map (page 374), see if you can find two, and name them. 4. On an outline map show the Hudson, Mohawk, and Genesee rivers, the Catskill and Adirondack mountains, three of the Finger Lakes, three railroads from New York to Buffalo, the largest cities, and the garden region.

5. In magazines find advertisements of articles made in cities along the Hudson-Mohawk trail. Bring them to class and make an exhibit.



© Fairchild Aerial Surveys, Inc.

Fig. 128. Manhattan Island from the air. Notice all the sky-scrapers at the tip of the Island. Can you find Central Park, the open space toward the top of the picture? The great bridges across the river are suspension bridges. They suspend, or hang, from steel cables that stretch between the towers.

WHAT OUR LARGEST CITY IS LIKE

An island of rock. When Peter Minuit bought Manhattan Island from the Indians for twenty-four dollars worth of trinkets, he did not know that he was making one of the biggest bargains ever known. Manhattan is a narrow island two and one-fourth miles wide and thirteen and one-half miles long, running nearly north and south. The little river that cuts it off at the northern end is the Harlem. From the map on the next page, tell what other waters surround the island. This famous little island is nearly solid rock, and it makes a firm foundation for America's greatest city, the second largest city in the world. But Manhattan Island is not all of New York. The whole city stretches over thirty miles from north to south. Eastward

it spreads out over part of Long Island to include Brooklyn.

What do you suppose Henry Hudson would think if he could come sailing into New York harbor today in his little *Half-Moon*? The first sight to meet his eyes would be the Statue of Liberty on a little island. This famous statue was given to the people of the United States by the people of France, in memory of the time our country won its freedom from England. The statue is 111 feet tall, and is a beautiful bronze figure of a woman holding a great torch in her uplifted hand. At night the whole statue is lighted by electricity. The inside is hollow, and you may take an elevator part way up, and then climb stairs and a ladder up through the statue into the head and even into the arm.

New York harbor. Freight ships from countries in almost every part of the globe lie in the harbor of New York and at the docks on both sides of the Hudson and East rivers. Across the Hudson on the New Jersey shore are still more docks where ships are loaded and unloaded. Surely this is a great seaport, the greatest in the United States, and one of the greatest in the world. There comes a big liner from South America right now steaming up the "Narrows" between Staten Island and Long Island. The first 1000-foot ship that came into the harbor and tried to turn around to get into her berth bumped into other smaller ships and ran into one of the docks. She needed a half-mile space and tugboats to help her turn.

A bird's-eye view of New York City. We will get into our automobile and ride through the busy streets to the Empire State Building, the tallest building in the world. We had better take the elevator to the top of this building, for it is one hundred two stories high. From the top we have a wonderful view of Manhattan Island and of the country around.

Manhattan Island is covered with streets and buildings, with only here and there a green park. Brooklyn is a part of New York City and is joined to it by several big bridges that cross East River. To the north smaller bridges cross the Harlem River to the



Fig. 129. New York City and the surrounding country

Bronx. The city stretches far to the north, and we see the open space that is Central Park, with its trees, lakes, and gardens. Jersey City, Bayonne, Hoboken, Newark, Passaic, and Paterson lie to the west. These cities are not counted as part of Greater New York, although they really are a part of it. The George Washington Bridge, across the Hudson, is one of the largest bridges in the world. Staten Island, almost covered with buildings, lies to the south and is a part of New York City.

Railroads. We wonder how all the people and their goods get into and out of the city. They

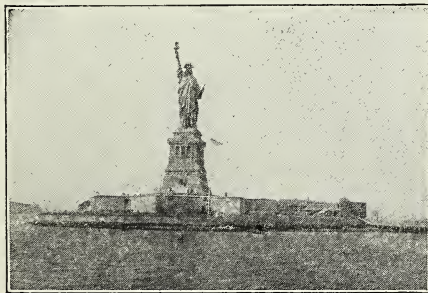


Fig. 130. The Statue of Liberty



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Fig. 131. To the front of the picture is a ferry boat with its load of passengers. A little farther back is a boat pushing scows or barges loaded with freight cars.

cannot all come and go in boats, although many ferry boats are kept busy carrying people and freight from shore to shore. As we look up the Hudson, we see a railroad running along it to the north. On the other side of the river we see many other railroads running north, west, and south. We know that one, the Pennsylvania Railroad, runs from the mammoth station through tunnels under the Hudson and on to the west. There are several other tunnels under the river for electric trains, automobiles, and trucks.

The railroads on the east side of the Hudson run into New England and Long Island. Thousands of people who work in New York have their homes up the Hudson, in New Jersey, and on Long Island. These people use the ferries, the tunnels, and the railroads in getting back and forth.

There are several ways of going from one part of the city to another. For example, there are two kinds of electric cars. One runs on the surface of the street. A second goes through tunnels underground, and is called the subway. The great tunnels, or tubes, of the subways run across the city under the streets in many directions. They even run under the Hudson and East rivers to New Jersey and Brooklyn. New York used to have an elevated railroad (see Fig. 132), but it was torn down.

A trip around New York. We are strangers in New York; so we will ride on top of one of the many double-deck motor busses that we see. This is a good way to learn what

the city is like. We may start at Battery Park, on the lower end of Manhattan Island, where Fort Amsterdam once stood (Figs. 104 and 128). We go north many miles on that famous street, Broadway. It is the only street that runs through the city from one end to the other. On Broadway at the head of Wall Street, in the midst of the great, bustling business district, stands an old brown stone building. This is the famous Trinity Church, built in 1697 on land given by the English government. A few years later it was burned, and the present church was built in 1790. This little church is one of the famous places of the city.

Let us ride north on Fifth Avenue, where we see store windows full of the most expensive clothes and fine house furnishings. Then we see the Public Library, Central Park, and the Metropolitan Museum of Art, and



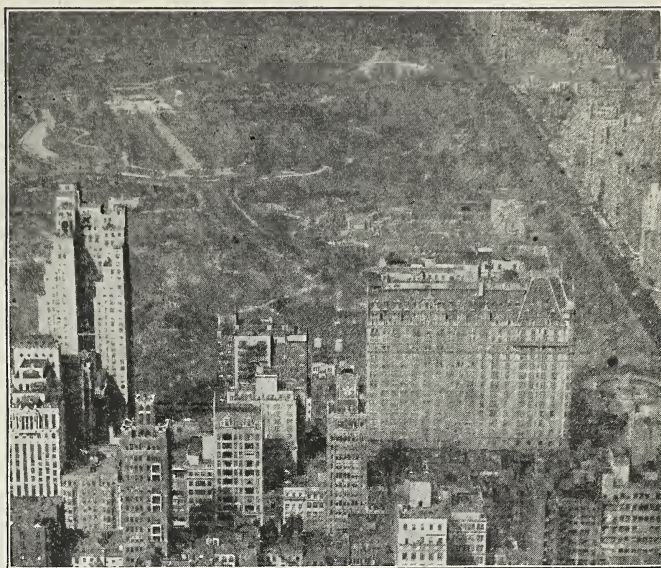
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Fig. 132. Elevated tracks, street-cars, and motor busses in New York

many beautiful homes. We turn west and drive along the banks of the Hudson up Riverside Drive until we come to General Grant's tomb and Columbia University, on the highest part of the island. Along Riverside Drive we find some of the finest apartment houses in the city. But we cannot expect to see all the sights worth seeing in New York City in one day, or even in many days.

Night is coming on, and we start back for our hotel. We decide to go up into the Empire State Building at night. From there we see millions of lights sparkling. Broadway, Fifth Avenue, and the other streets are lines of bright lights. The autos and street-cars now look like bugs with bright eyes. Lights are moving on the Hudson River. Over there to the west we can see groups of lights; we know that those places are Weehawken, Hoboken, Jersey City, Newark, Passaic, Paterson, and Orange. Perhaps those lights near Orange are West Orange, where Thomas Edison, the inventor of the electric light, lived and had his workshops.

Edison — the wizard of electricity. Edison earned his first money as a newsboy on the train from Detroit to Port Huron. With this money he bought chemicals and apparatus with which to try experiments. The trainmen let Edison put his chemicals in a corner of the baggage car, until one day the train jolted and upset the chemicals, which set the car on fire.



James Sawders

Fig. 133. Apartment buildings and Central Park along Fifth Avenue

Because Edison saved a railroad man's little girl from being run over by a train, he was given the opportunity to learn to be a telegraph operator. He studied hard and became an expert. One day he arrived in Boston looking for a job as telegraph operator. He was cold, tired, and hungry, and his clothes were shabby. When he asked for a

job, the other operators laughed at him. They planned a good joke: He was told to receive a telegraph message from New York for one of the daily papers. Then they arranged with an operator in New York to send the message so fast that the shabby stranger could not take it. The New York operator did his best, and the telegraph clicked and rattled out its dots and dashes, but Edison took every word without a mistake.

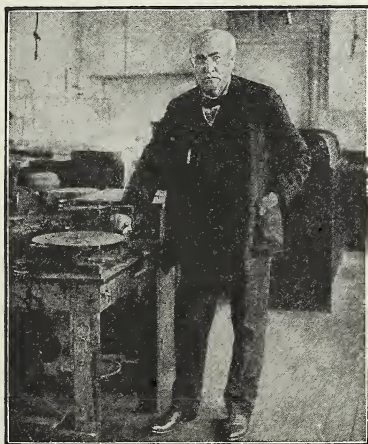
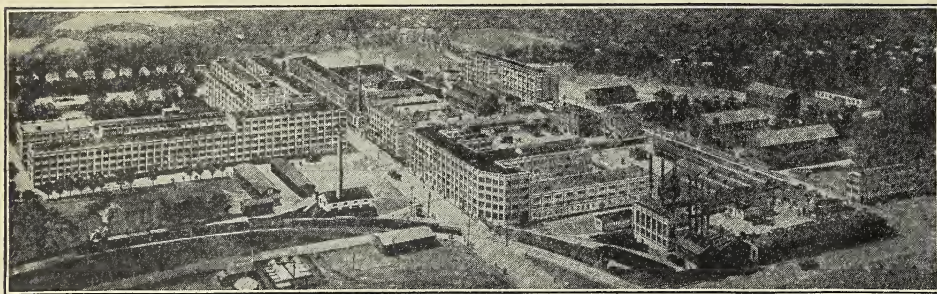


Fig. 134. Edison in his laboratory



Courtesy Edison Laboratory

Fig. 135. Edison's great electrical shops at West Orange, New Jersey

From Boston, Edison went to New York, where he got another job. One day some very important telegraph instruments were out of



Edison Lamp Works

Fig. 136. Edison's first electric lamp

order, and no one could fix them. Edison was called in, and in a short time had them working all right. He was then hired by the telegraph company to keep the instruments in shape and to improve them. In a few years he set up a shop of his own and employed other men to work with him. Edison invented many hundreds of articles, but he was proudest of the electric light. The electric lo-

comotive was thought out by this "wizard," as he is called. We all enjoy the phonograph that Edison invented, and the motion picture that he improved. We would be much less comfortable and life would be less interesting without the inventions that Edison made.

Men in the laboratory at West Orange carry on the work started by Edison.

The immigrants. Now let us learn something about the people who live in this great city of New York. There are more people in that part of New York known as the East Side than in any other part of it. Many have parents that were born in foreign lands. They came to America because they knew they could live better and easier in our rich and

free country. These newcomers to our land we call immigrants.

When the immigrants reach New York, they are taken to Ellis Island, where our Government keeps them long enough to see whether they have good health and money enough to keep them from starving until they can get work. Some of these newcomers find work in factories, some sell fruit and other foods from push-carts (Fig. 137), some work on the truck farms, and some go to other sections of the country. Perhaps you have read of Steinmetz, another great "wizard of electricity"; or of Pupin, the great scientist; or of Jacob Riis, Theodore Roosevelt's friend. All of these men, and many other fine citizens of our country, were once immigrants.

But life is not easy for these people in a land where everything is strange and new. The lonely immigrant likes to live among



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Fig. 137. The push-cart peddlers in New York's foreign district sell everything from fruit to clothing.

those who know his customs and speak his language. We should want this, too, if we went to a foreign country. So, in the heart of New York City they live together in their own little groups, almost as though they were in villages in their native lands. Here they have their own Little Spain, their own Little Sweden, their own Little Greece, and so on. The children of these foreign-born parents go to our schools where they are taught to read and write our language, and to understand our country.

Many East Siders in New York City are too poor to own automobiles, or even to pay carfare, to take them out into the country. So their only yards and playgrounds are the streets and the public parks of the city. Do you know that many children in New York City have never seen a farm, with cows, pigs, and chickens?

Besides all the foreigners who came to New York City to live, hundreds and thousands of Americans go there every year to make their homes. Then, there are thousands who come for a few days or a few weeks to see the sights of the largest city in America. Merchants come to buy goods to sell in their stores at home. Still others come to stay longer—artists, musicians, writers, and stu-

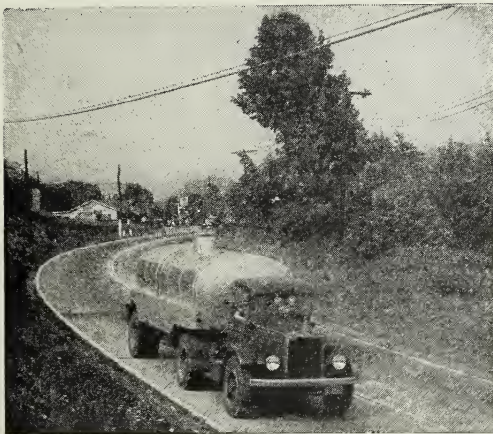


© Keystone View Co.

Fig. 138. The streets are the playgrounds for many children of crowded New York City.

dents who wish to work and study under the great teachers. Here they visit the art galleries and attend the theaters and concerts, for New York is an art center. It also ranks first of all our cities in the publication of books and magazines.

How New York gets its food supply. We ask ourselves where all the food comes from to feed these millions of people, for in all of New York City there is hardly a foot of ground where one may plant a fruit tree, raise a vegetable, or keep a cow or chicken. But if we could see inside all the trains and boats that come into the city every day, we should there find the answer to our question. For hundreds of miles inland from the city in the states of New York, Pennsylvania, and New Jersey, there are dairy farms. From these farms hundreds of carloads of fresh milk are shipped in every night. This is bottled and delivered early, so that the people may have fresh milk each morning. Whole trainloads of fresh vegetables, fruits, poultry, meat, flour, butter, cheese, and canned goods



U. S. Department of Agriculture

Fig. 139. Keeping milk cool on its way to the city



© Keystone View Co.

Fig. 140. Docks at Hoboken. Study the picture on page 1, and Fig. 128, page 86, also.

come in to the city every day. You see, then, that all the country around helps to supply this city with food.

Along the miles and miles of New York's water front, boats unload their cargoes: coffee and tea from across the sea, rice and fruits from the South, sea foods from New England and from the great bays and sounds to the south. If the hundreds of trains and boats which bring food to New York City were to stop for a single day, many people would have to go hungry, and the babies and little children would suffer from lack of milk. You can see, then, how entirely this city depends upon the railroads and ships for food and other supplies.

Shipping and manufacturing. But this great city needs so many things besides food. It needs coal, iron, and steel from Pennsylvania, cotton from the South, and many, many other things for its factories and homes. Other countries of the world ship their goods to New York to be sold in America. Is it not easy to see why New York City is one of the greatest markets and one of the greatest shipping centers in the world? With its fine

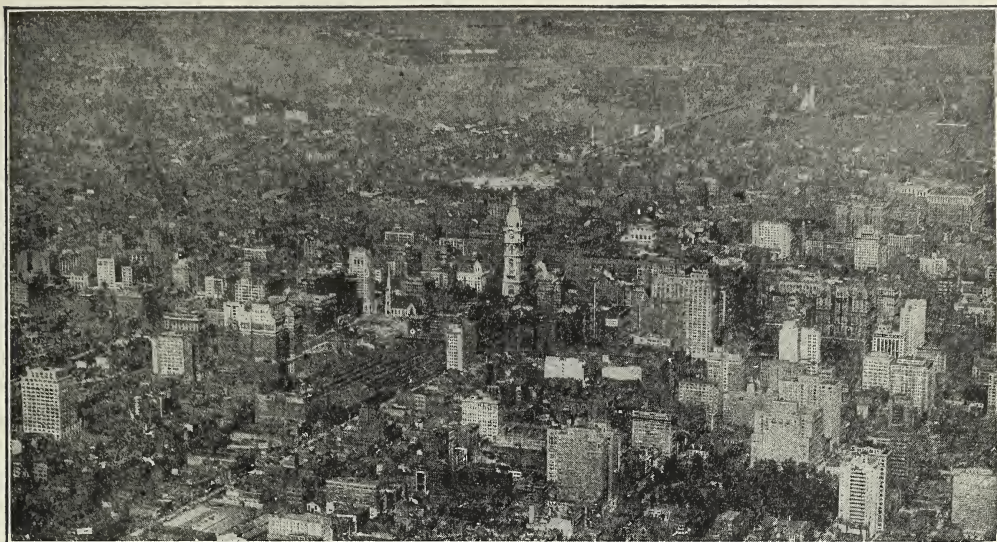
harbor and long fingers of railroads, canals, and steamship lines, and with so many people and cities all around, it reaches out and grasps trade from the whole world.

New York City leads in the making of men's and women's clothing. Many of the workers who live in the city learn to run machines in the clothing factories. Where do you suppose New York gets the cotton and wool cloth for making clothes? In Paterson, New Jersey, there are great silk mills in which many people work. Here in the great factories they weave the lovely cloth that we all admire. Paterson is the Silk City of the United States. It is close to New York City, where thousands of yards of cloth are made into garments of different kinds.

Now can you imagine how many people it takes to keep this immense city going? Think of all the men who work on the docks, loading and unloading freight; the people working in hotels and restaurants; and the street-car conductors, policemen, and postmen. Of course, the other large cities in the United States are in many ways like New York. In each city thousands of people live close together; they have their foreign sections, their schools, churches, libraries, and their parks. Around all our big cities are small towns, close by, called suburbs. In these towns live many of the people who work in the city. Some cities manufacture one thing, some another. If we know how people live in one city, we can imagine how they live in another.

QUESTIONS TO ANSWER

1. Name some countries from which steamers bring people and goods to New York.
2. Because so many ships come into New York harbor, what must be built all along the water front?
3. How do so many people travel about and in and out of the city without getting in each other's way on the streets?
4. What are some of the things Edison has invented? How have his inventions helped our homes and our cities?
5. Tell how New York is fed.
6. What is the Silk City of the United States?



© Aero Service Corporation, Philadelphia

Fig. 141. An airplane view of Philadelphia. Can you see the bridge across the Delaware River to Camden?

PHILADELPHIA

Philadelphia, the Quaker City, is the center for southeast Pennsylvania, that part of New Jersey nearby, and Delaware. It has a good harbor in the right place. Like Boston and New York, it is one of our great seaports. Philadelphia is not so large as New York, nor are there so many cities close by. Camden, across the Delaware River, is like Jersey City across from New York.

Around Philadelphia are the largest locomotive works in the country and a number of large ship-building companies. But the city is noted also for the making of rugs and carpets. Pennsylvania at one time raised many sheep, which provided wool for carpet-making, and in this way the industry was started. Hats, saws, leathers, chemicals, and sugar are other things for which Philadelphia is noted.

Benjamin Franklin. Perhaps we know Philadelphia best as the home of Benjamin Franklin, the poor printer boy, who went to the city to get work and came to be one of America's greatest men. He really did more than William Penn to make this a great city.

Franklin invented the first stove in America, started the first public library, and the first fire department. He also proved that lightning and electricity are the same (Fig. 142). He started one of the first magazines in America; it is still printed in Philadelphia. At the time of the War for Independence Franklin went to France to get help for our country

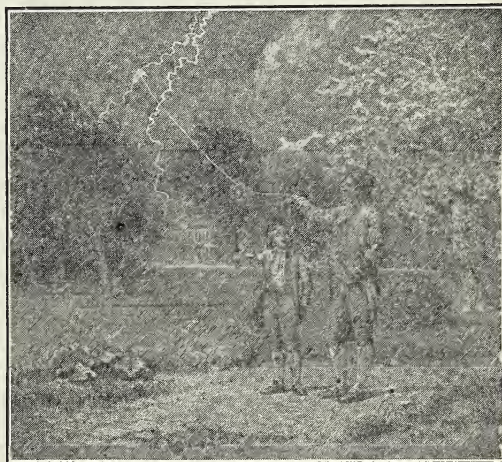
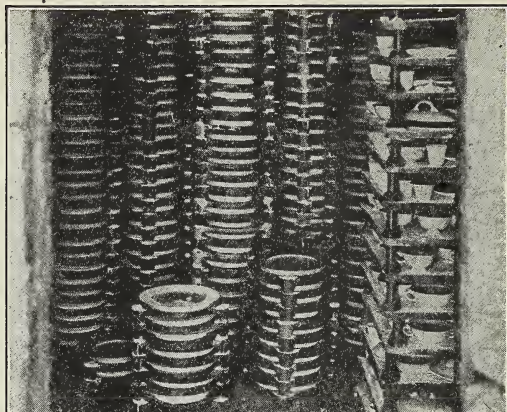


Fig. 142. Electricity from the sky traveled down the wet string, and sparks flew from the key.



James Sawders

Fig. 143. Clay for making our dishes and tile is dug from the earth in this way.



Courtesy Lennox, Inc.

Fig. 144. After the clay has been shaped into pottery, it is baked in an oven to make it hard.

in its fight for freedom. He was so wise as our representative in Europe that he did much to make the people of the Old World respect the young nation in the New World. We also remember Franklin for many wise and witty things he said. "A penny saved is a penny earned" and "A stitch in time saves nine" were two of his sayings.

Camden and Trenton. We cross the Delaware River on the fine bridge to Camden. Here we see carloads of canned soups and canned vegetables that are shipped over the country. You remember that the fertile Coastal Plain grows great quantities of vegetables. You have learned that in Baltimore and Annapolis are many canning factories. Camden, too, gets vegetables, berries, and other fruit from the Coastal Plain truck farms of New Jersey and Delaware. Steel pen points, thousands of radios and phonographs are made there, too.

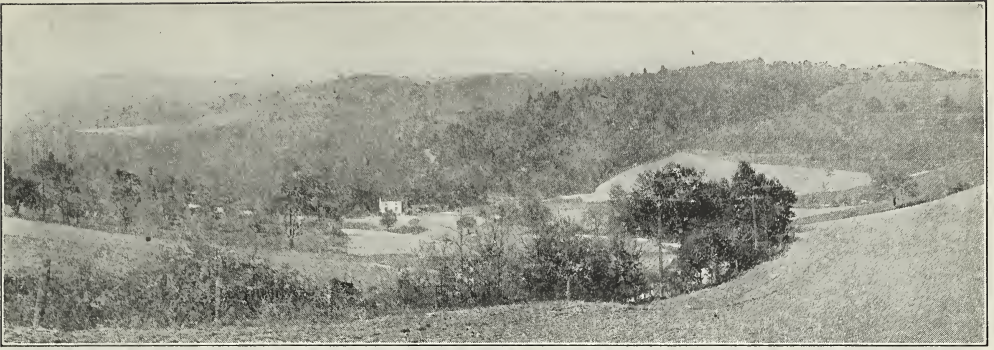
Trenton, on the Delaware, is the capital of New Jersey and furnishes us with copper wire, linoleum, and plates, cups, and saucers (pottery) made from clay. In New Jersey there are great beds of clay that is just right for making our dishes, vases, and bowls. Terra-cotta and tile for buildings are made from this clay. There are about forty pottery factories in Trenton. Scott Lenox was the pioneer in pottery-working in this city. The



Courtesy Rookwood Potteries

Fig. 145. The potter's wheel. As the vase turns slowly on the flat wheel, the potter shapes the soft clay with his fingers.

potter's wheel (Fig. 145) interested him while he was still a school-boy. Good friends gave him help, and after he had learned the trade, he started a pottery of his own. He wanted to make beautiful china-ware. When he had almost succeeded, he lost his eyesight, and his legs became paralyzed; but he would not give up. With the help of an assistant he at last succeeded in making the beautiful china of his dreams.



James Sawders

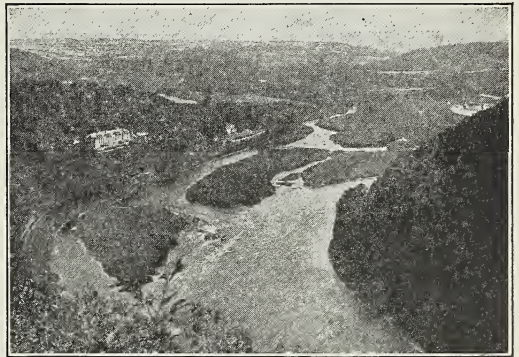
Fig. 146. Rolling Piedmont farm land in southeastern Pennsylvania. Land like this attracted many of the early settlers, and they soon had fine farms.

THE PIEDMONT AND MOUNTAINS

The Piedmont. The Piedmont of the New York and Delaware Bay region is the southeastern part of Pennsylvania and a little of northwestern New Jersey. Locate it on the map. It is a rich mixed farming section, just as it is in Virginia. The Germans, Scotch, and Swedes who settled this section were good farmers. Here they found a good soil and fine pasture for dairy cattle. They were soon growing good crops of wheat, corn, and hay, and planting orchards and gardens. In this region today you see fine farm-houses and barns and well kept farms.

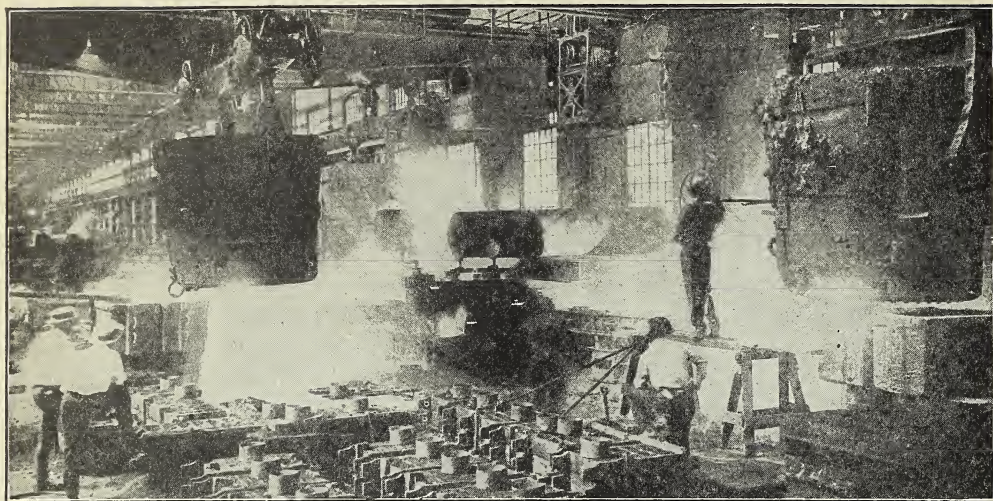
Factories using water power from smaller streams that flow into the Delaware River were built at Philadelphia, Chester, and Wilmington. Strange to say, the Delaware itself has no falls. It has cut right through the mountains instead of falling down the side. To the west, in the hills and mountains of the Piedmont and the Appalachian Highland, there was plenty of water power; so Harrisburg on the Susquehanna River, Reading on the Schuylkill, Bethlehem on the Lehigh, and other cities grew up as manufacturing towns. So many factories were built that soon there was not enough water power to run the machinery of all of them. We shall learn that in, or near, this region there is plenty of coal to make steam power.

The highlands. Locate the Appalachian Highlands on the map facing page 1. At the northern end the Adirondack and the Catskill mountains in New York seem to stand out by themselves. The mountains of Pennsylvania, in this region, are much lower than the mountains are, either to the north or to the south. Study the relief map, and you will see ridges and valleys across Pennsylvania and southern New York. The Delaware, Susquehanna, Monongahela, Allegheny, Genesee, and Mohawk rivers flow down these valleys and through the ridges. See how the rivers flow in three different directions—into the Atlantic Ocean, the



By Ewing Galloway, N. Y.

Fig. 147. Where the Delaware cuts through the mountains. Gaps in the mountains, usually cut by rivers, were a great help to the early settlers when they moved westward across our country.



By Ewing Galloway, N. Y.

Fig. 148. Steel for railroad rails, ships, and many other purposes is made in these great mills at Bethlehem, Pennsylvania. The big buckets are full of molten steel, which is being run into molds, where it hardens into the shape that is wanted.

Great Lakes, and the Mississippi River. Trace some of these rivers on the maps (pages 16-17 and 80) and see into what bodies of water they empty.

This whole highland region was once covered with a heavy forest of hardwoods, hemlock, and pine. In northern New York there are today forests of spruce, used in paper-making, which is an important industry of the state.

THE STORY OF COAL

The discovery of coal. William Penn had agreed to give the king one-fifth of all the gold the Quakers found, but the Quakers found neither gold nor silver. Their descendants did find something in the hills and mountains that proved of more value to them than gold or silver could have been. They found iron, coal, rocks for making cement, gas, oil, slate, sand, and clay.

One day two young Quakers were hunting in the woods northwest of Philadelphia. When night came, they found that they were too far away to go home for the night. So

they caught some fish from the little stream they had followed, to cook with venison, or deer meat, for their supper. To hold up the wood for the fire, they needed two big stones. On the side of the hill they found two shiny black rocks. The hunters ate their supper and lay down to sleep. Along in the night they woke up because they were too warm. To their surprise they found that the two shiny black stones were burned to ashes. They had discovered coal in America. Even in Europe coal was not common. People used wood and charcoal for fuel.

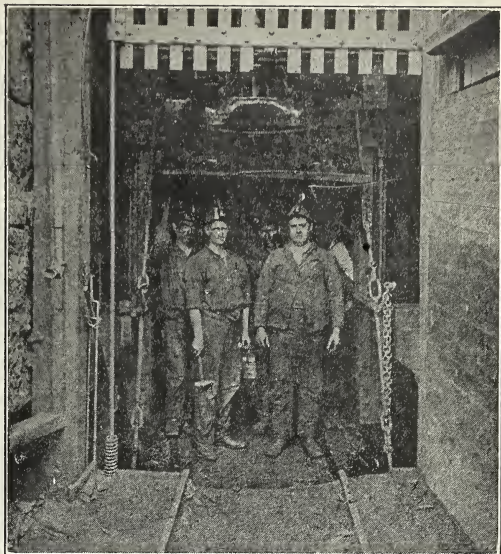
How coal was made. Do you wonder how these great beds of coal, which furnish us with heat, light, and power, were made? In a far-off time, before there were any people on the earth, this region was very warm and damp, just right for plants and trees to grow. Ferns were as tall as trees, and trees themselves grew to great sizes. In the course of time the land on which these vast forests had grown began to sink, and water flowed into the low places and washed soil over the plants and trees. Thousands of

years rolled on, the plants and trees beneath the water became entirely covered with soil, and the land began slowly to rise. The waters drained off, and forests grew once more. Then again the land sank. This happened again and again until there were several layers of trees and soil.

As the layers were pressed down under the water and soil, the air was kept out. After many thousands of years the great weight and lack of air changed the drowned trees and plants into the coal we now know. That is why coal is always found in layers, with beds of clay and rock between them. The shapes of tree roots and the marks of ferns which are so often found in the coal prove the truth of this wonderful story.

Kinds of coal. Peat is the youngest member of the coal family. In bogs and swamps we find layers of trees, plants, and roots that have been pressed down just long enough to burn a little, like coal, when dug out and dried. In Ireland, where there are many such bogs, peat is the chief fuel. It is cut and lifted out in squares with a spade, like sod, and piled up to dry. Lignite is another member of the coal family. It has been pressed down for a few thousand years longer than peat. It is brown, fairly hard, and burns with a great smoke. It is not used much. Great beds of it are found in North Dakota and Montana.

Soft, or bituminous, coal is just a few million years older than lignite. It has really become coal. It is dull black, and breaks up rather easily if left in the air. Soft coal is the kind most used. There is more of it in the United States than of any other kind. It is easier to mine, because it breaks up so much more easily than hard coal. Hard coal is also known as anthracite coal. We like to use anthracite coal in our stoves and furnaces, as it burns slowly with almost no smoke and is cleaner than soft coal, which is dusty. Both coal and diamonds have much carbon in them, and both are shiny. This is why coal is often called "black diamonds."

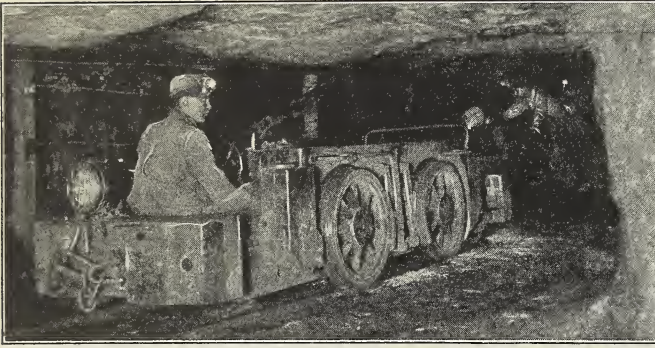


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Fig. 149. A mine "cage" ready to lower the miners into the shaft for the day's work

The coal miner. Let us suppose we know a coal miner's son, named Henry. Henry had lived all his life in the heart of the hard-coal region near Scranton, in a little wooden house near the great mine in which his father worked. Day after day he had seen his father leave home in the morning with his dinner pail and come home at night, tired and covered with black coal dust. Henry knew that all day long his father had been working far under the ground away from the bright sunshine and the blue sky. In some coal regions Henry might have been at work in the mine when much younger to help buy food and clothes for the family; but the laws of his state do not allow children to spend long hours doing such hard work. But now that Henry was sixteen, he was glad to go to work with his father through the vacation and help earn his food and clothing.

Down into the mines. Early one morning Henry went with his father to the mine. He was going to stay and work all day. At the mouth of the shaft they stepped into the elevator cage (see above) and were carried



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Fig. 150. An electric train in the gallery of a coal mine. Electric machines are used for cutting the coal in many mines.

down very fast and far. The black wall of the shaft seemed to rush upward past them as they went deeper and deeper, hundreds of feet into the dark earth. Then the elevator stopped, and they stepped out at the bottom of the shaft. They lighted the little lamps on the front of their caps and made their way through the dark tunnel, or gallery, that led to the chamber, or room, in which Henry's father worked. Along the tunnel and into the chamber was laid a narrow railroad track on which ran little low cars for hauling the coal. Around them and above them were the rough, black walls of the mine. In these walls Henry saw layers of coal and rock which glistened in the dim light of the little lamps on their caps.

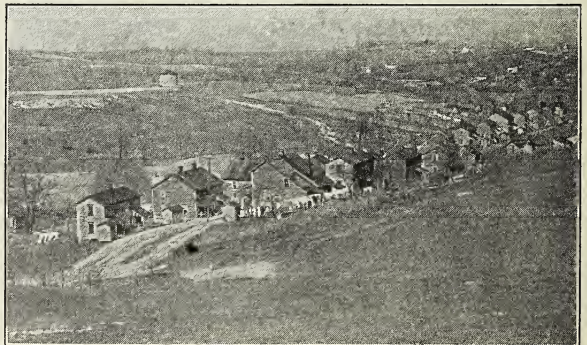
Undercutting the coal. Another miner joined Henry's father, and Henry watched the two men undercut the coal. With a machine they cut a long, deep groove in the wall of coal near the floor. Part way up the wall they bored a hole in which they placed some dynamite. "Now we will put the ends of these wires into the dynamite," said Henry's father, "and run the wires around the corner." Henry watched the men and saw them connect the wires to a box-like machine with a rod

sticking from the top. "A man called a shot-firer pushes the rod, which connects the wires and shoots an electric spark into the dynamite," Henry's father said. "Here he is now; so watch and listen." Down went the rod, and a loud Boom! came from the spot where they had been working. When the smoke and dust had cleared away, they went back and found that the big wall of coal into which they had cut was now a

heap of loose lumps of coal.

The men examined the chamber to see that no loose rocks or coal would fall on them. Then they ran a car into the chamber and loaded the coal on it. Henry rode on the electric engine to the elevator. After the coal was lifted to the top of the shaft (Fig. 152), it was dumped into a tippie, a place where the cars are emptied by tipping, and shuffled over screens with holes of different sizes. Each size is given a name—buckwheat, pea, chestnut, stove, egg—and is loaded into a separate car or stored in a separate pile.

Dangers of coal mining. Henry felt he had learned a great deal about mining, and



James Sawders

Fig. 151. A Pennsylvania mining town. Many of these towns consist of a row of houses, a single street, and a store.

he had been thinking hard. The air in the mine shaft was not very fresh, and the shaft was dark and gloomy. He longed for the clear air and the sunshine above him. Although great fans blew fresh air down the shaft and through the tunnels, he knew that deadly gas might be waiting in pockets or corners to kill him, or that some careless miner might cause an explosion that would kill many of the miners. He could see that mining was a dangerous occupation as well as hard work. He was glad when the long day was over and it was time for the men to stop work and go home.

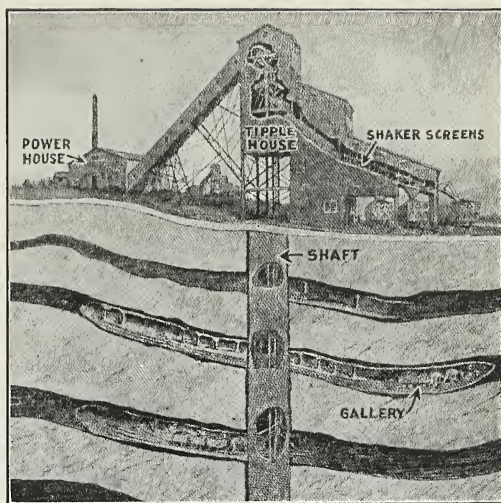
Strip mines. Coal mines are not all so deep down in the ground as those in the great anthracite beds in Pennsylvania. Sometimes the coal lies near the surface and is blasted out like stone from a quarry. These are called strip mines. Sometimes the miners tunnel into the side of a hill and run their cars to the open track just like a train coming out from a railroad tunnel.

On the coal map locate the different coal fields. The only large anthracite field is in eastern Pennsylvania. There are not many hard-coal fields in the whole world, but anthracite is produced in Wales, and large fields have been found in Russia. Scranton and Wilkesbarre are important coal cities.



U. S. Geological Survey

Fig. 153. Where coal is found in the United States

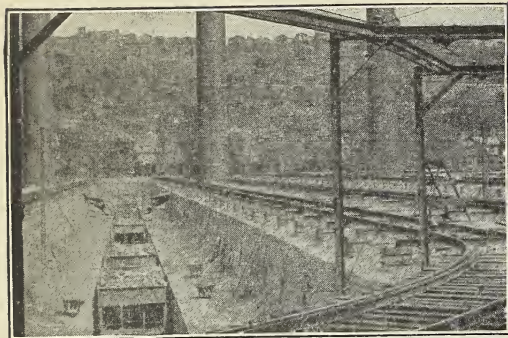


Courtesy "Scientific American"

Fig. 152. How coal is taken from the earth. This is called shaft mining. Some other minerals are mined in this way also.

Soft coal. One of the largest soft-coal fields is in the Appalachian Mountains; it extends all the way from Pennsylvania to Alabama. The broadest part of the field is in Pennsylvania, and Pittsburgh is the great coal city for that field. It is easy to understand why Pittsburgh is a great coal city. In the first place, a large part of the coal for the United States is mined in the Pittsburgh district. Second, the coal can be shipped out so easily. This city is at the head of the Ohio River, and thousands of tons of coal are shipped down that river on barges to the cities along the way. The railroads have used the river valleys around Pittsburgh as easy ways to go from east to west and from north to south. Rivers and railroads seem to meet at Pittsburgh (Fig. 158).

Coke. Perhaps you burn coke in your furnace at home. Did you know that coke is made from soft coal? To make coke, the coal is put into a big oven,



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Fig. 154. Coke ovens. The tracks on top are for the cars that dump the coal into the ovens.

most of the air is shut out, and the oven heated red-hot. Since most of the air is shut out, the coal cannot all burn up. You know that fire must have air, or it will not burn. Only the gases in the coal are driven out and burned. What is left is called coke. This is cleaner than soft coal and not so expensive as hard coal. The soft coal of the Pittsburgh district makes good coke. Connellsville is the coking center. In making iron and steel, coke is used for the fire to melt the iron.

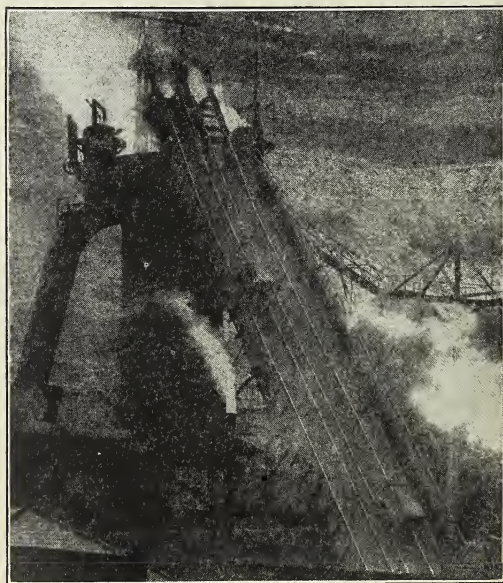
IRON AND STEEL

Skeletons of steel and iron. When William Penn laid out Philadelphia, the only materials he knew for building houses were stone, brick, and wood. If Penn should visit his city of Brotherly Love now, he would be amazed at the tall skyscrapers on Market Street. He would marvel at the wonderful suspension bridge across the Delaware River to Camden. Penn would soon learn that the thin walls of the great skyscrapers would come tumbling down if the steel skeleton of beams, girders, and bolts were taken out. He would see so many things made from iron and steel that he would understand why people say that we of today live in the Age of Iron and Steel.

The first mineral mined in this region was iron ore in eastern Pennsylvania. You remember that it was in this same section that

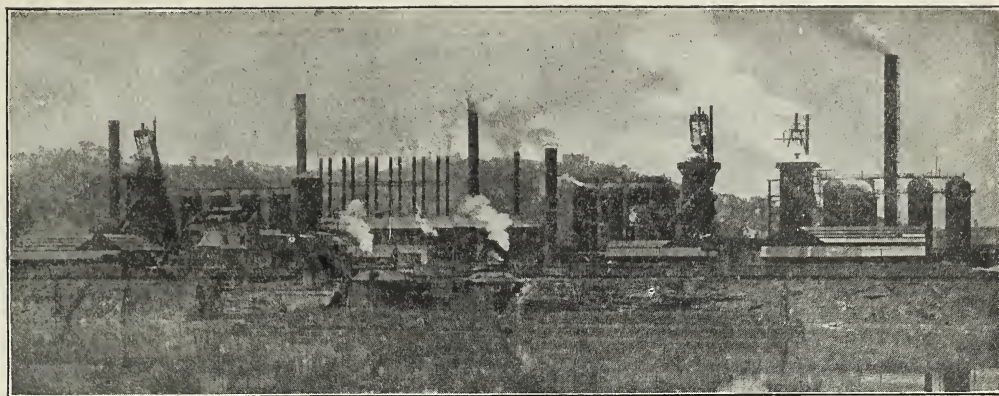
coal was found. Limestone is needed in making iron, and there is plenty of that in the whole Appalachian Highland. So the manufacture of iron goods began early in eastern Pennsylvania. During the first seventy-five years of the Pennsylvania colony furnaces for making iron and steel and foundries for making articles of iron and steel were built at Philadelphia, Reading, Bethlehem (Fig. 148), Wilmington, and Trenton.

How iron is made. When iron comes from the mine, it is not pure; there are other things mixed with it. This mixture is called iron ore. Therefore it has to be melted, or smelted, in a furnace in order that the pure iron may be separated from the impurities. First a ton or two of coke is carried to the top of the furnace and dumped into it (Fig. 155); twice as much iron ore is next dumped in; then half as much limestone as coke. Coke, ore, and limestone are poured in until the furnace is full. Fire is started in the coke and is kept burning by a powerful blast of air. That is why they are called blast fur-



© Keystone View Co.

Fig. 155. Loading the furnace with iron ore, limestone, and coke. See also Figure 157.



By Ewing Galloway, N. Y.

Fig. 156. Iron furnaces on the Allegheny River near Pittsburgh. Two barges loaded with coal for the furnaces are tied to the river bank.

naces. You know that a fire burns better if you blow it. The heat is terrific—ten to fifteen times as hot as the fire in our stoves.

The iron melts out and settles to the bottom of the furnace. The fire is so hot that the limestone melts, too. This melted limestone gathers into it the impurities that were in the iron ore. It is lighter than the iron; so it rises to the top just as oil floats on top of water. It is called slag, and runs out through a separate opening higher up. A plug is pulled out every so often from the bottom of the furnace, and the white-hot iron runs out into molds where it is cooled into bars about two feet long. These bars are called pig-iron. The pig-iron then goes to the iron foundry or the steel mill. In the iron foundry the bars are remelted and molded, or cast, into many different articles, such as pipes, stoves, and radiators.

Steel. To make steel the pig-iron is remelted, and small amounts of carbon or of some other element are added to it. This makes

it harder and tougher than iron. It is then called steel. The heavier steel goods, such as steel rails, are made in mills near the furnaces, mostly in Pittsburgh and Bethlehem (Fig. 148). Some of the steel is sent to other eastern cities where it is refined again and made into small articles like watch springs, knives, and needles.

Pittsburgh, the steel center. When people began to move westward by way of Pittsburgh, it was not long until furnaces and foundries were built in and near Pittsburgh to make iron goods for the people of the new settlements. After the railroads were built down the valleys to Pittsburgh, more and more furnaces were built in this district, for the needed coal was near at hand and the steel and iron could easily be shipped east. So Pittsburgh, the coal center, became the iron and steel center for the United States.

If you should take an airplane trip over Pittsburgh, you would see great clouds of smoke rising from the huge blast furnaces and iron

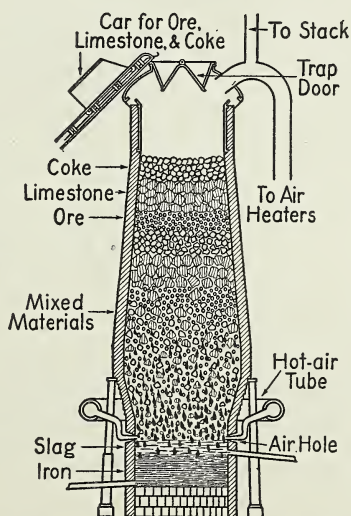
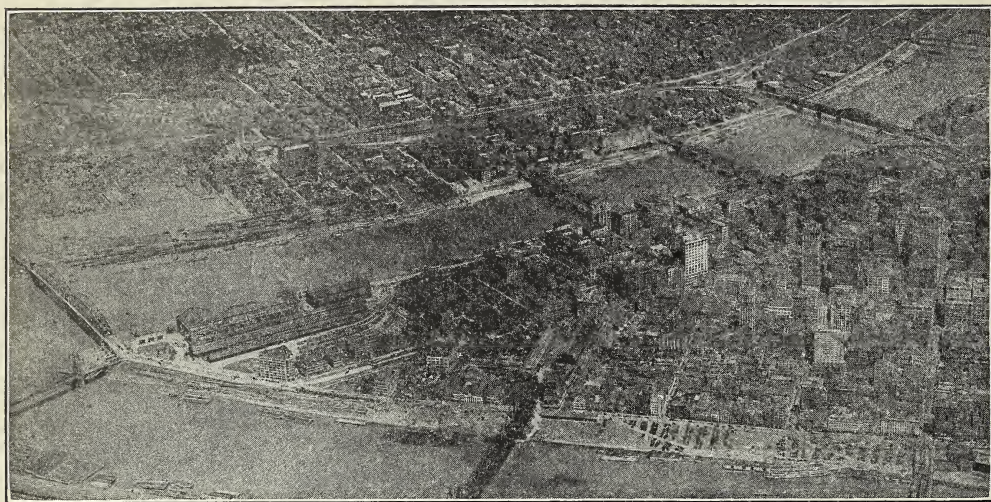


Fig. 157. How an iron furnace works



© Aero Service Corporation, Philadelphia

Fig. 158. The heart of Pittsburgh, where the Ohio River begins. What two rivers are shown in this picture?

and steel mills, and from those up and down the valleys for miles around. The scene is a pretty one at night. All the land and sky seem to be afire from the sparks and flames that shoot high into the air from the chimneys and from the glow of the furnaces. Work in the furnaces and mills seldom stops day or night.

Altoona, Johnstown, a number of smaller towns near Pittsburgh, Wheeling, West Virginia, and Youngstown, Ohio, are in what is known as the Pittsburgh district. Buffalo, New York, is in the same district. Pennsylvania is now the leading state in producing iron and steel goods. The New York-Delaware Bay region produces a large part of the iron and steel in the United States.

There are large rayon factories in Lewistown and Marcus Hook, both in Pennsylvania. Parkersburg, West Virginia, and other towns of Pennsylvania and West Virginia also manufacture rayon.

Pennsylvania produces about one-third of the plate glass of the country, and Pittsburgh is the center for glass-making. Glass is made from sand, and the sand found in this state is of just the right quality. To make glass, the sand must be melted in hot furnaces, and

Pittsburgh has the coal to run these furnaces. The highland region back of eastern Pennsylvania also produces a fine grade of cement made from the limestone found there. A great deal of cement is made in the Lehigh Valley, near the towns of Bethlehem and Allentown. Pennsylvania also has many slate quarries.



By Ewing Galloway, N. Y.

Fig. 159. Limestone is very useful. It helps to purify iron ore, is a fine fertilizer to make the soil rich, and gives us cement for sidewalks, streets, and buildings.

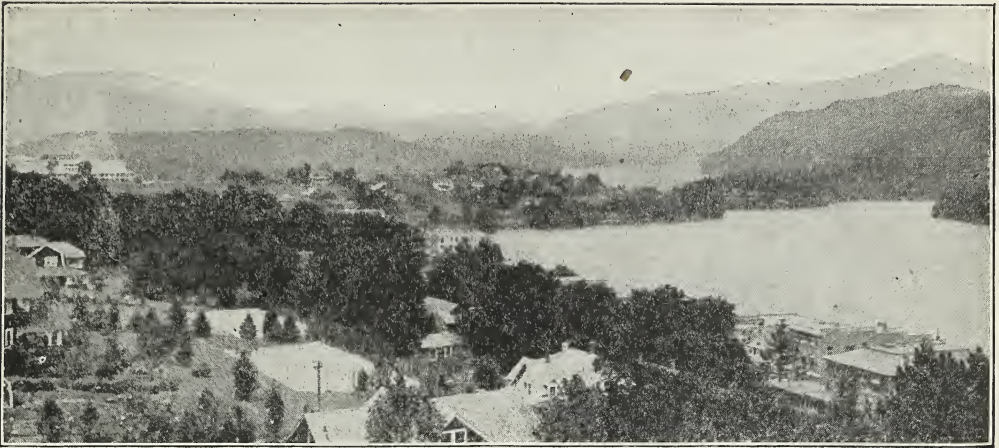


Fig. 160. Mirror Lake and Lake Placid in the Adirondacks. These lakes are also noted for winter sports, such as skating, tobogganing, and skiing.

PLAY-TIME

In the hot summer time when we have a day off, we go down to Coney Island, at the southern edge of New York City, to bathe and enjoy the many amusements with thousands of other people. If we have a little more time, perhaps a week or two, and a little more money, we go to one of the fashionable bathing beaches on the New Jersey coast—Long Branch, Asbury Park, or Atlantic City. Bathing in the salt water and lounging on the beach soon give us a healthy tan that makes us look like Indians. Many sick people get well and strong by spending a month or two at the seashore.

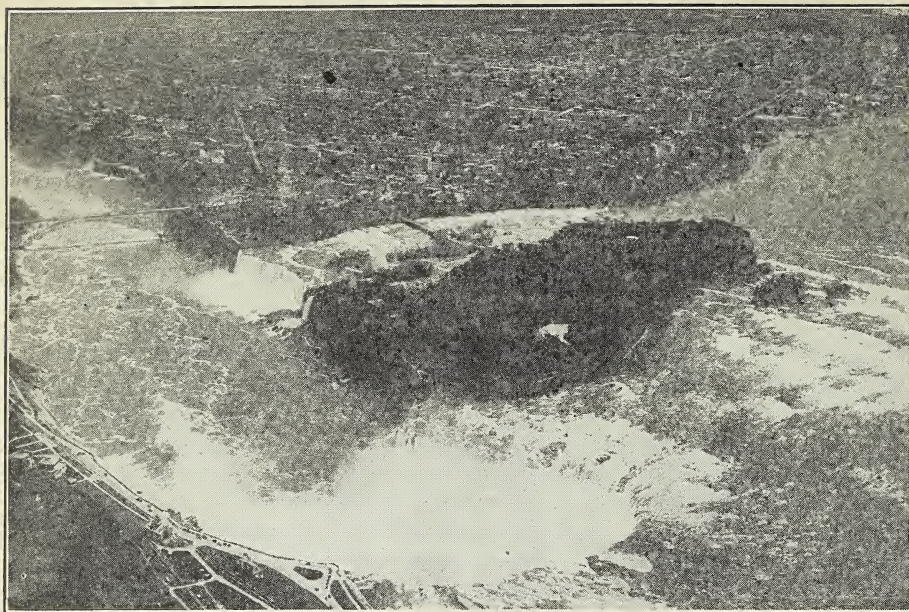
But for a real vacation and a real rest, we board one of the large river steamers, and go up the Hudson to Kingston. From there we take a train to the Catskill Mountains, and find the place where people say Rip Van Winkle slept for twenty years.

Then let's take the train for Saratoga Springs to drink the mineral waters for a day or two. We cannot stay here long, for the Adirondacks are calling us, and we pack our camping outfit for a two weeks' stay on beautiful Lake George. We swim, row, and fish. We climb French Mountain and view the Green Mountains in Vermont and the round-

topped Adirondacks with beautiful lakes between. Over there lies glistening Lake Champlain, and we decide to take a steamer trip and visit Canada, especially the city of Quebec.

At Quebec we take a boat and go up the St. Lawrence River to the Thousand Islands, just where the river leaves Lake Ontario. We do not stop to count the islands, but there are so many of them that we believe there must be a thousand. Each one is beautiful, and we find many summer homes on them.

We must not fail to see Niagara Falls before we go home. The steamer soon lands us at Lewiston, a little way up the Niagara River. Then we drive in cars or buses until we come to the mighty falls. How beautiful they are! We can imagine the excitement of the early explorers when they first saw this wonderful sight. What a noise the falls make! No wonder the Indians called them Thundering Water! We ride on a little boat, the *Maid of the Mist*, which takes us so close to the falls that the spray dashes all over us. Then we put on oil-cloth suits and go down under and back of the falls. The water pours down in front of us like a great curtain. The roar is so loud that we cannot hear anything else, and when we come out,



Courtesy Buffalo Chamber of Commerce

Fig. 161. An airplane view of Niagara Falls and the city. The waters of these great falls are used to produce electricity for homes and factories in many cities.

the water is dripping from our suits. We change to our dry clothing and stop for a long, last look at the falls. Every time we look, the scene is more beautiful, and we plan to come again next year.

QUESTIONS TO ANSWER

1. In what state is most of the Piedmont of this region? What city is the center for the Piedmont? 2. What river runs along the Fall Line? 3. Name the important rivers of the New York-Pennsylvania region. 4. What is used for power today more than water? 5. For what would you say that Philadelphia is noted? 6. Which city makes dishes for us? Tell how pottery is made.

7. What valuable minerals are in the mountain section of these states and all through the Appalachians? 8. Tell the story of coal—how it was made and how it is mined. Why is anthracite coal more expensive than soft coal? 9. Why should miners receive good pay? 10. How does it happen that Pittsburgh is the greatest iron and steel center in the world? 11. What has to be done to iron ore before it can be used to make stoves and other articles? How is steel different from iron? 12. Why

did not Pennsylvania build a canal and get the business from the West that New York got?

THINGS TO DO

1. Write a letter telling about a visit to New York City; try to learn about other sights than those in the text. 2. Make a drawing to show a shaft into a coal mine, the galleries that go out from the shaft, and the breakers at the top. 3. On an outline or sketch map show the following: Hudson, Mohawk, Delaware, Susquehanna, and Ohio rivers, Erie Canal, the garden spots, coal, iron, Lake Ontario, Lake Erie, and the Finger Lakes. 4. See if you can make a picture of a coal mine with its tipple house, shaft, and galleries.

Books to read: Allen, *Industrial Reader, United States*, pp. 44-58, 139-157, 172-188; Brigham, *From Trail to Railway*, pp. 40-52; Carpenter, *The Foods We Eat*, pp. 46-54, 87-105; Jordan and Cather, *Highlights of Geography*, pp. 232-233, 237-238, 245-248; Lefferts, *Our Own United States*, pp. 31-77; McFee, *American Heroes From History*, pp. 145-158; Rocheleau, *Great American Industries*, pp. 50-65; Southworth and Kramer, *Great Cities of the United States*, pp. 3-39, 67-87, 189-205.

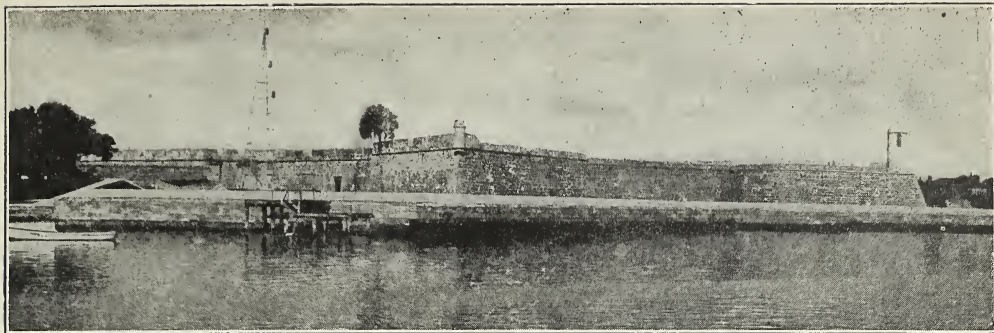


Fig. 162. Fort Marion at St. Augustine, Florida, the first white settlement in our country. The fort stands almost as the Spanish built it hundreds of years ago. They called it San Juan de Pino and later San Marco.

THE SOUTH ATLANTIC REGION

THE SETTLEMENT OF THE CAROLINAS AND GEORGIA

WHY THE ENGLISH FIRST SETTLED ALONG THE NORTH ATLANTIC

The low, swampy coast. We may wonder why the English colonists first settled the country to the north of the James River instead of to the south in the Carolinas and Georgia. The soil was rich, and England claimed all the country south of Virginia to Florida. Yet the colonists did not go to this region, as we have learned. We shall soon see that this was mostly because of the kind of coast that the early explorers found in the Carolinas, and because the Spaniards were strong in the country to the south.

For hundreds of miles along the coast of the Carolinas and Florida these explorers found long, low, narrow reefs of sand now called banks, or keys. Sometimes the wind drove the boats through an inlet into the quiet waters of Albemarle and Pamlico sounds. Study the map of these states (page 112). There they were safe from the storms of the ocean, but they were in danger of running aground on a sandbar, as the water was so shallow. The coast of the mainland itself looked dark and dangerous. Thick forests of cypress and live oak sprang from the black oozy mud of the swamps along the shore.

Queer-looking streamers of gray Spanish moss hung from the branches of many of the trees (Fig. 163). This swampy region was full of mosquitoes. Many of the sailors became sick with malaria, a disease that we now know is carried by a certain kind of mosquito. Back of these swamps stretched miles of flat, sandy country, covered with heavy pine for-

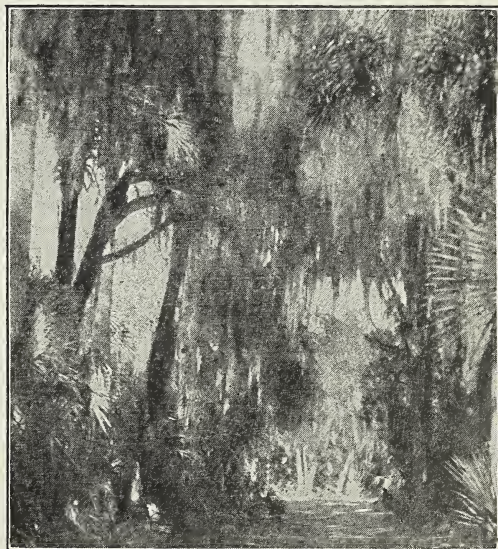


Fig. 163. Trees with their streamers of Spanish moss

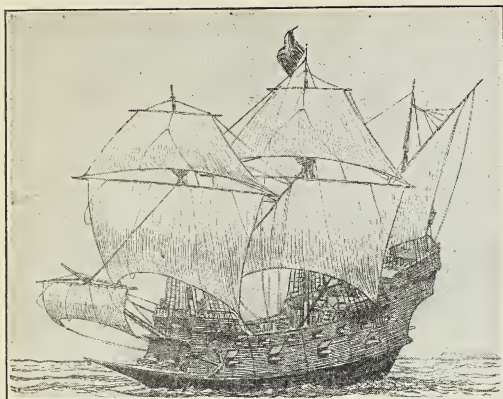


Fig. 164. A Spanish galleon of Drake's time

ests. The Coastal Plain in this region is very low and extends far back from the sea.

The Spaniards. Spain was the strongest country in Europe at the time that Raleigh tried to plant his colony in the new land. The king of Spain was not only ruler of his own country, but was also emperor of Germany, Austria, Belgium, and Holland. Spain was the richest country in Europe. Her great treasure ships, called galleons, were bringing home loads of gold and silver from Mexico and Peru. These treasure ships were protected by powerful warships. The Spaniards ran everything as they pleased. They would not allow English ships to trade with their colonies in the West Indies islands; nor would they even let them enter their harbors to get supplies. Spanish explorers had traveled over what is now Florida, Georgia, North and South Carolina, and the country to the west. So of course they said they owned all this land. At St. Augustine, Florida, they had made the first settlement in what is now our country. But they were finding too much gold and silver in Mexico and South America to bother with the country along the Atlantic.

Of course Spain and England became bitter enemies; and although England was not a very strong nation then, Hawkins, Drake, Frobisher, and Howard—those great English sea captains—would not stand such treatment from the Spaniards. They boldly sailed the seas and captured the Spanish galleons wherever they could find them.

The defeat of Spain. Finally the Spaniards decided to give the English a thorough beating. They assembled a great fleet of 132 ships, with 27,000 men. This was called the Spanish Armada. "Now," said the king of Spain, "I will sweep those English dogs from the seas. I will land my soldiers in England and conquer the whole country."

In the year 1588 the Spanish Armada sailed boldly into the English Channel. The Spaniards must have been amused at the fleet of small English ships that sailed out to meet them. But soon they were having their troubles. These swift-sailing, easily handled little ships swarmed around the great clumsy Spanish warships like bees. Some of England's greatest "Knights of the Sea" were in command, and the Englishmen were defending their homes. They fought with such bravery and daring that the Armada was defeated and driven into the North Sea, where a terrible storm wrecked most of the ships.

This great defeat broke the power of Spain on the high seas, and it proved to be a very important event in the settlement of America. Now the English were free to explore and settle as they pleased. Almost one hundred years had passed since Columbus saw the shores of the new land, yet the Spaniards had been the only ones who had made any settlements. Now England awoke, and soon little English settlements began in Virginia, Maryland, and New England.



Fig. 165. Statue of Drake at Plymouth, England. Why is he shown with a globe of the world beside him?

THE SETTLEMENT OF THE CAROLINAS

The English colonies spread southward. Nineteen years after the defeat of the Spanish Armada the English colony at Jamestown was started. You already know the story of Virginia, and you will remember that the colonists there soon found that they needed more land for raising tobacco. Yet at first they had no thought of going farther south, where they could get all the land they wanted. The Great Dismal Swamp with its deep, muddy ground, and its dense cypress forest stretched along the coast of Virginia for thirty miles to the south. Runaway slaves and white men who had done some wrong sought this dark region as a hiding place. It also made a good retreat for the Indians. Then too, the Spaniards still had their forts and settlements in this country to the south.

However, some of the bolder and more restless Virginians had already moved southward along the shore of Albemarle Sound. In 1653 they made the first lasting settlement in northeastern Carolina. This was known as the Albemarle Settlement. About this

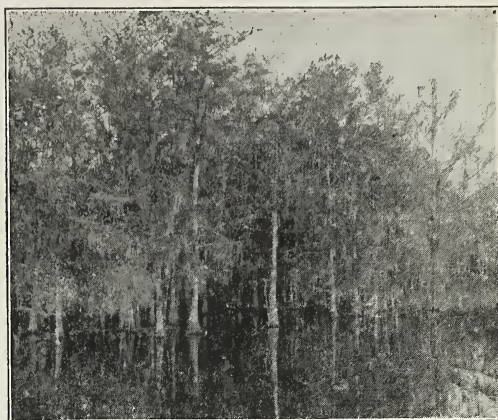


Fig. 166. In a Southern cypress swamp. See also the picture on page 261.

time Charles II, king of England, wished to reward eight noblemen who had been loyal to him in a time of need. He granted them all of the land that lay between Virginia and Florida, and from the Atlantic to the Pacific oceans. This big tract of land was to be called Carolina, in honor of the king, whose name in Latin was Carolus. And those eight noblemen were to be known as the Lords Proprietor of Carolina. In 1670 William Sayle brought two shiploads of English colonists over, and founded a colony on the west side of the Ashley River. This was the first settlement in southern Carolina, but the people did not stay there long. They soon moved to the neck of land between the Ashley and Cooper rivers, and started the settlement which is now the city of Charleston (Figs. 167 and 168). French Protestants, known as Huguenots, also settled in this region. They, too, had come to this country so that they might worship God as they pleased. Settlers from Ireland, Germany, and Holland also came to Charleston. Soon it was the most important town along the South Atlantic coast. Later a settlement was made on the Chowan River, and named Edenton, for Governor Eden. Wilmington was started on Cape Fear River, and a little band of Scotch Highlanders settled there.



Fig. 167. First settlements along the South Atlantic



Courtesy Charleston Chamber of Commerce

Fig. 168. Docks along the Cooper River at Charleston. In the background is the Ashley River.

For a number of years the southern colony—the one at Charleston—grew much faster than the Albemarle colony. This was partly because it had a better harbor, and partly because the Lords Proprietor were more interested in the southern part of their territory. They were really two separate colonies from the beginning, although the whole region was known as Carolina.

Settlers come from the northern colonies. Many Scotch-Irish and Germans from Pennsylvania came into the western and central parts of Carolina by way of the Shenandoah Valley. Many Quakers came, too, over the same road. So you see, the settlers of Carolina came in through the back door as well as the front. Study the map (page 164) to see how these people could travel south through the great valley.

For a long time these first settlers in central and western Carolina lived mostly by trapping and hunting. But, little by little, farming became their chief occupation. They

began to raise tobacco on the fertile lands along the Virginia border, and many herds of cattle browsed on the fine pasture lands of that region. When ship-building on Chesapeake Bay called for the products of the pine forests of North Carolina, a great lumber business was started. In the making of ships there were also needed great quantities of turpentine, rosin, and tar. These are called "naval stores." They were made from the sap of the long-leaf pine that was so plentiful in North Carolina (Figs. 169 and 170). The people of that state are still called Tarheels because of this industry of an earlier day. Georgia and Florida are now the leading states for naval stores.

The beginning of rice-growing. One day a sea captain brought a bag of rice from the island of Madagascar, near Africa, and planted it near Charleston. It grew so well that the people saved the seed and planted more the next year. This, then, was the beginning of rice-growing in America. Rice

keeps better than any other grain, and there was great demand for it on the sailing vessels of those days. These ships touched our shores on their way from England to the West Indies, and during these long trips under the hot sun of the southern seas there was need of food supplies that would not spoil.

GEORGIA AND JAMES OGLETHORPE

Oglethorpe and the debtor's prisons. In the days of the colonists it was the law in England that, if a man did not pay his bills, the person whom he owed could send him to jail until the debt was paid. Often there was no one to earn this money for the poor man, and he lay helpless in prison, unable to earn enough to free himself.

Because one of his friends had died in a debtor's prison, James Oglethorpe became deeply interested in these unhappy debtors and wished to help them. "What a silly custom," said Oglethorpe, "to place a man where he cannot earn money, and then tell him to pay his debts!" He went to the king and asked him this question: "If I gather together a number of good, honest debtors, will you give me land in America to which I may take them so that they may have another chance?" Then Oglethorpe added: "Why not let me have some land south of your colony of Carolina. The Indians and Spaniards are always



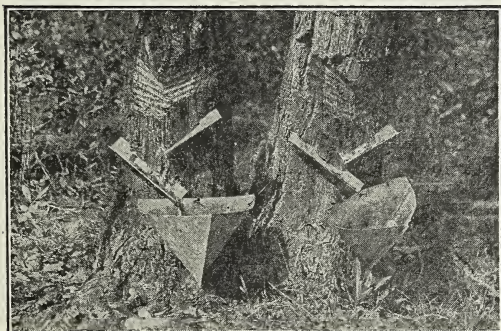
James Sawders

Fig. 169. Southern long-leaf pine. How do these trees differ in appearance from other pine trees?

threatening to come up from the south. We will make settlements and build forts which will protect your colony." This idea appealed to the king, and he gave Oglethorpe all the territory between the Savannah and Altamaha rivers, from the Atlantic to the Pacific. The new colony was to be named Georgia, in honor of King George II.

The founding of Savannah. In 1733, one hundred twenty-six years after the settlement of Jamestown, Oglethorpe brought his little party of about a hundred men, women, and children, and founded the present city of Savannah. It was agreed that there should be no slavery within the borders of the new colony, and that no one should trade with the Indians without permission. For the first few years the settlers were to have free use of the land, but each settler could have only a small number of acres—as much land as he could take care of himself without slaves. With these rules, Oglethorpe hoped to have a happy, successful colony.

Georgia, being the southernmost of the English colonies, was nearest the Spanish and in most danger of being attacked by them. The colonists knew that if they were to keep



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Fig. 170. "Bleeding" pine trees to get the sap for making rosin and turpentine. What other tree gives sap that is useful to us?



© Keystone View Co.

Fig. 171. Augusta, Georgia, today. Here Oglethorpe built a little fort in the wilderness, two years after Savannah was founded. It soon became an important fur-trading center. Can you name the river shown in this picture? Study the maps on pages 107 and 112.

the Spaniards back, they must have the good will of the Indians. Georgia was part of the territory which then belonged to the Cherokee and the Creek tribes. The Indians liked Oglethorpe for his kind manner and honest promises; so they signed a treaty of friendship with the whites, and agreed to help them protect the colony from the Spaniards.

The colony prospers. The people in this colony were allowed to worship as they pleased; so it was not long until settlers who wished for religious freedom came to Georgia. Among these were many Germans and a group of Scotch Highlanders.

The colonists did not like the law against slaves. They thought that the settlers in the colonies to the north, with their great plantations and their slaves to do the work, were making more money and having an easier time. Finally slaves were brought in, and each settler was allowed all the land he could buy. People from South Carolina moved in with their slaves, and rice-growing was started. After that, Georgia grew rapidly and prospered. It became a colony of many great plantations, like Virginia and the Carolinas.

QUESTIONS TO ANSWER

1. What river or rivers probably brought the sand and mud that made the islands and banks of Albemarle Sound? 2. Find five other rivers in this region. A famous song has been written about one of them. Do you know which? 3. Would the Pilgrims have been likely to find a rock along this coast on which to land? 4. Which part of our Atlantic coast was first settled by the English? Why? 5. Where is the English Channel? 6. Suppose the English had not defeated the Spanish Armada; what language might now be spoken by the people in Carolina? 7. What kept the Virginians from moving southward? 8. What different peoples finally settled the Carolinas? 9. Why were the North Carolinians nicknamed "Tar-heels"? 10. Tell the story of Oglethorpe and the settlement of Georgia. 11. What people came to Carolina that they might worship as they pleased? 12. Now think hard and answer this question: How and why were the South Atlantic colonies different from the New England colonies?

THINGS TO DO

You have now studied the settlement of our country along the Atlantic from Maine to Florida. On an outline map show all these settlements. You might also write a story on "How the white men settled the Atlantic coast of our country."



By Ewing Galloway, N. Y.

Fig. 172. Dismal Swamp Canal, connecting Albemarle Sound and Chesapeake Bay. George Washington planned this canal. The road you see is the George Washington Highway running from Norfolk, Virginia, to Elizabeth City, North Carolina.

THE SOUTH ATLANTIC REGION TODAY

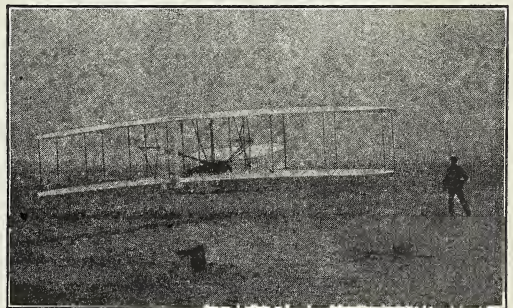
Coastal Plain, Piedmont, and mountains. The South Atlantic region of which you have been reading lies mostly in the Atlantic Coastal Plain. Do you remember how important this broad fertile plain was in the early history of Virginia? It was just as important in the history of the Carolinas and Georgia. Like Virginia, these states have three great belts running north and south across them. There is the broad Coastal Plain with its slow tidewater rivers, its bays and sounds, its fringe of low outlying sand bars along the coast. As one goes back from the sea, he comes to the Piedmont, with its rolling, hilly country, and its rivers plunging down over the Fall Line to the Coastal Plain. Farther back is the narrower Appalachian Mountain section. As one might expect, this South Atlantic region has many kinds of climate, scenery, and industry.

THE COASTAL REGION

The Dismal Swamp. Let's pretend to take Sir Francis Drake on an airplane trip over these states, along whose coast he sailed so long ago. Surely he will enjoy it. Of course, he will find the coast much the same today as it was then. But the country has changed so much that he will not know

it. We shall start our air trip from Roanoke Island, where Raleigh's colonists landed. First, then, let us circle to the north, so that Sir Francis may look down into the Great Dismal Swamp. He will see that a large part of the swamp has been drained, and is now used for farming. The sandy soil is good for raising peanuts and vegetables. These are shipped out to Norfolk, Virginia, through the canal that drains the swamp (Fig. 172).

Kitty Hawk and Cape Hatteras. Now we turn to the south and take Sir Francis over the sand hills near Kitty Hawk, on the border of Albemarle Sound. We want him to take a good look at them, for this is where Orville



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Fig. 173. The Wright brothers trying out their first airplane at Kitty Hawk. The plane stayed up fifty-nine seconds. The flyer lay flat on the lower wing.



Fig. 174. The South Atlantic states

and Wilbur Wright tried out their first airplane. They had plenty of room here, and the wind came in from the ocean just right to help them as they tried to fly the new inven-

tion. There on stormy Cape Hatteras is a tall lighthouse, the largest in the United States. By day its great stripes of black and white can be seen from far away. At night



Courtesy Wilmington Chamber of Commerce

Fig. 175. A big field of strawberries in the fine truck-farming region around Wilmington, North Carolina



U. S. Department of Agriculture

Fig. 176. Packing cucumbers in Georgia while the people of the northern cities are still shoveling snow.

its powerful light throws a beam twenty miles out to sea. All along the coast our national government keeps lighthouses to guide ships sailing in from the ocean (Fig. 177).

Wilmington. Let's fly a little farther with Sir Francis, over the long, swampy coast where the pirates of old lay hidden, and on toward the seaport of Wilmington. Today, instead of pirate ships flying the Jolly Roger, or pirate flag, we see sailboats and launches going out into the sound or the sea for fish. They return loaded down with shining fish, mostly menhaden, bluefish, and shad.

We look down on Wilmington, a few miles from the mouth of Cape Fear River, and see a busy seaport with a good harbor. Wilmington is the chief shipping point for the products of North Carolina. Here also are ship-building yards, cottonseed oil mills, cotton and lumber mills, and fertilizer factories. Ships carrying cotton, tobacco, lumber, vegetables, fruit, and passengers, bound for New York, for other seaports of our country, and across the sea, sail out of the harbor at Wilmington.

Truck farming. The early settlers must have found many different kinds of food near the coast, for the Raleigh colonists told about the Indians who gave them "fruit, melons, walnuts, cucumbers, gourds, peas, very excellent food, and of their corn which is very white, fair, and well-tasted."

Today this Coastal Plain from Virginia to Florida is a big early garden for the northern cities. The growing season in the coastal region of the Carolinas is from seven to eight months long. When we say "growing season," we mean the number of days or months between the last frost in the spring and the first frost in the fall. You know that most of our plants from which we get food will not grow in freezing weather.

As we go farther to the south, the season becomes longer and longer, until in Florida vegetables are grown and shipped the whole year through. Central Florida has a growing season 300 days long, while New York has only about 150 days during which it is warm enough for plants to grow. Study Figure 195, page 122. About how long is the growing season where you live?



U. S. Bureau of Lighthouses

Fig. 177. Hatteras light



James Sawders

Fig. 178. Along the famous Battery drive in Charleston. This fine drive runs along the sea wall overlooking the harbor.

Charleston. On down the coast we come to Charleston, the chief city of South Carolina and one of the important Atlantic seaports south of Chesapeake Bay. As we study it from the air (Fig. 168), we understand its importance. We see its splendid harbor which was so highly prized by the pirates of the early days as they cast about for a safe place to anchor. Railroads running across Georgia south of the mountains connect Charleston with the far west. Two trunk-, or main-line, railroads connect it directly with the north. The Panama Canal and New Orleans are easily reached by sea. Follow on the map on page 10 the route a ship could take from Charleston through the Panama Canal to San Francisco. The greatest United States Navy Yard south of Norfolk is at Charleston.

If we were to leave our airplane and wander about the city, we should find many factories and all the busy life of a seaport. We should also see a number of interesting old homes which have been carefully kept up. We should find a wealth of lovely flowers and shrubs around the many beautiful homes, shady parks and

driveways, and long avenues of palmetto trees which have given Charleston the name of Palmetto City.

We cross many rivers on this airplane trip. They are not quite so broad as the James River, but are the same kind of slow-moving tidewater river. The valleys through which they flow are very fertile, and the land is cut up into many fine plantations. In what direction do nearly all of the

rivers of the South Atlantic region flow?

Savannah. Now let us leave Sir Francis and imagine we pick up James Oglethorpe. We know he will be glad to see the prosperous state for which he worked so hard, long years ago. We cross the Savannah River into Georgia and fly over the city of Savannah. Oglethorpe recalls his little colony in huts and is amazed at the busy port he now sees; its wharves piled high with cotton, lumber, naval stores, and farm products of all kinds; its steamship lines carrying these products and passengers to the seaports of our country and of the world.



Courtesy Savannah Board of Trade

Fig. 179. Bales of cotton on the docks at Savannah

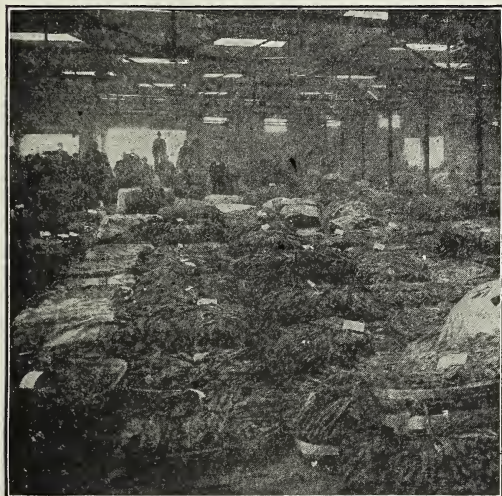


U. S. Department of Agriculture

Fig. 180. A peach orchard in the Piedmont region of Georgia. If you look at Figure 146, page 95, you can see that this rolling Piedmont country is the same from Pennsylvania to Georgia.

THE INLAND SOUTH ATLANTIC REGION

Forests and farm land. As we fly onward across the southern part of the state, our guest wonders what has become of the heavy forests that covered this land in his day. We must tell him that for many years Georgia and other states cut their forests without planting new trees. In spite of this, today southern Georgia and northern Florida have the largest forests of pine in the South Atlantic region.



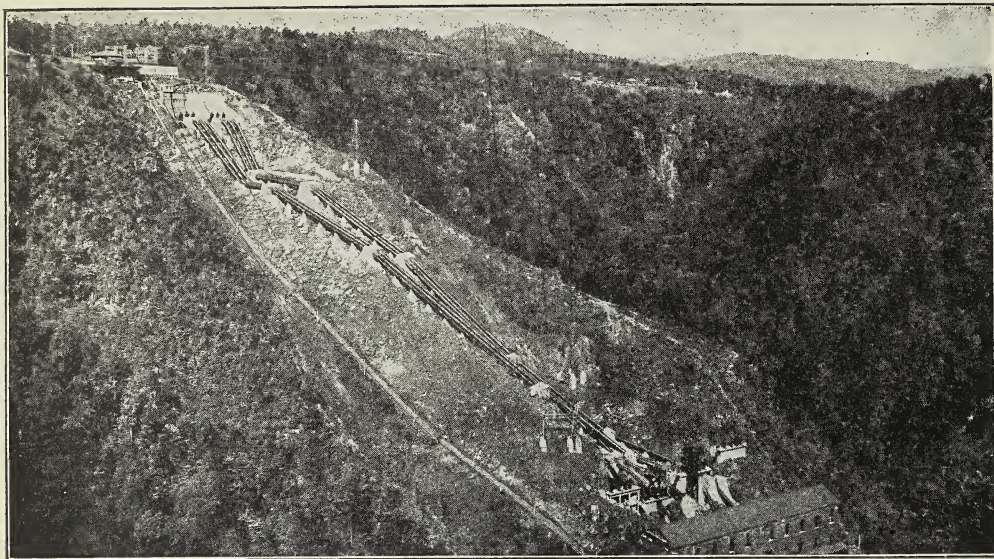
Courtesy Winston-Salem Chamber of Commerce

Fig. 181. Tobacco at the warehouse in Winston-Salem. North Carolina is the greatest tobacco-growing and manufacturing state.

Even though most of the forests are gone, Oglethorpe is delighted with the rich fields of cotton whose white bolls seem to twinkle at us as we pass, the fields of corn higher than a man's head, the acres of Irish and sweet potatoes, and the wonderful orchards and gardens to be seen everywhere. It is said that nearly every kind of fruit, vegetable, and flower grown anywhere in the United States will grow in the South Atlantic region.

The Piedmont region. Now we shall leave our famous guest and fly westward across the southern part of the state to the Chattahoochee River; then up that valley until we come to Columbus, at the southern end of the Fall Line and the Piedmont region.

We know that in the Chesapeake Bay region rivers along the Fall Line were good places for cities to grow. The same thing is true along the Fall Line here. Columbus, Macon, Augusta, Columbia, Durham, and Raleigh are Fall-Line cities. They are markets for cotton, corn, fruits, tobacco, and lumber. All have water-power for their cotton factories. Macon is prosperous because of the rich soil of that district. Columbia, the capital of South Carolina, is a market for lumber. Raleigh, the capital of North Carolina is a lumber, tobacco, and cotton market. Durham and Winston-Salem are tobacco markets. This is the chief tobacco-growing region now.



Courtesy Georgia Power Co.

Fig. 182. A power plant in the Southern Appalachian Mountains. The water from a lake at the top rushes down these great pipes and by its power runs dynamos in the power-house at the bottom. These dynamos produce electricity which is carried away on wires to run machinery and to light homes.

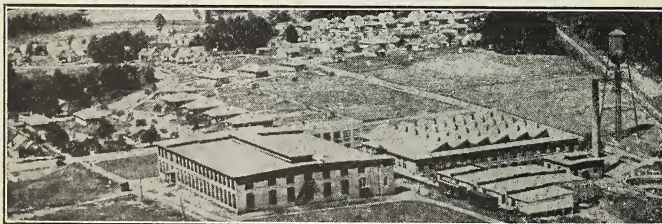
Cotton-mill towns. As we fly over the Piedmont, we see many cotton-mill towns: Atlanta, Greenville, Spartanburg, Charlotte, and Raleigh. Find them on the map. There are others that could be added to the list. About half of the cotton mills in the United States are in this region. The Charlotte-Gastonia district of North Carolina has many large mills. The cotton mills of New England are now moving to the South where the cotton grows. These cotton states also have plenty of water power from the rivers of the Appalachians, and they have coal fields in the mountains. So, although Massachusetts

is still a leading cotton-spinning state, North Carolina, South Carolina, and Georgia now have most of the industry.

Now that rayon is an important fabric, there are many rayon-mills in North Carolina and Georgia, in addition to the cotton-mills of the section.

Atlanta. We shall stop awhile at Atlanta, the capital of Georgia. This city is located in just the right place to become important. You can see that it is at the southern end of the Appalachian Highlands, and at the cross-roads between the East and West and the North and South. Many business firms from

the West and the North have branch offices here, where it is handy to ship goods. We notice many peach orchards in the surrounding country. Atlanta is the center of the peach-growing section of the Georgia Piedmont (Fig. 180). These peaches are usually the first sent to the northern markets.



Courtesy N. Carolina Dept. of Conservation

Fig. 183. One of the many new cotton-mill towns that are growing up in the Carolinas, Georgia, and southern Virginia



Photo by J. T. Holloway

Fig. 184. Atlanta, the capital city of Georgia, and one of the most important cities of the Southern states

The mountains. We fly northward toward the Blue Ridge Mountains and come to the third division of these states. Our airplane rises higher and higher as we fly over hills, farms, and orchards. As we pass over the mountains, we see a beautiful country which is called the "Playground of the South." Over there to our right is Mt. Mitchell, the highest mountain in the eastern United States. To the west rise the Great Smoky Mountains, in which are Mt. Guyot and Clingmans Dome, the two next highest peaks in the East. The Great Smokies are so beautiful that the United States Govern-

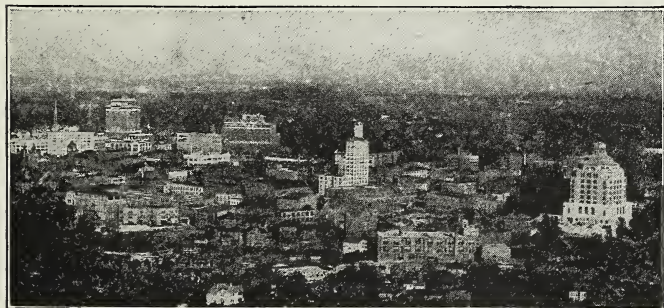
ment has included most of them in a national park. This mountain region is covered with many fine forests of hardwood trees, such as oak, birch, ash, and walnut.

Asheville, North Carolina, with its beautiful homes and tree-lined avenues, lies just before us. The real business of Asheville is to care for the thousands of people who come to this section for pleasure or health, both summer and winter. There are several fine hotels in and around Asheville. Hundreds of people play golf and tennis, and ride horseback over the beautiful trails and the highways through the mountains.

FLORIDA

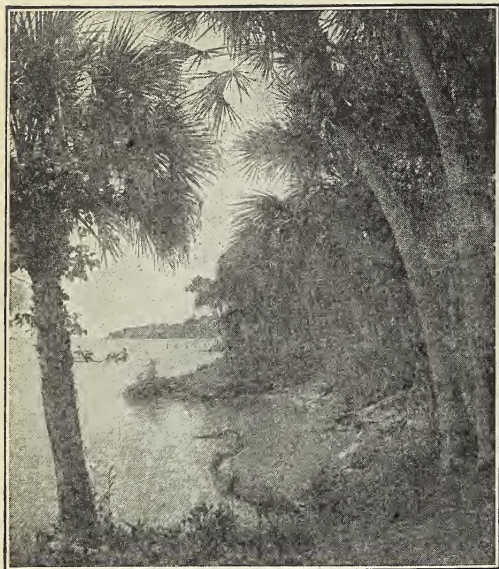
The "Fountain of Youth."

The second time that Columbus came to America, he brought his friend Ponce de Leon with him. The king had made De Leon governor of the island of Puerto Rico, in the West Indies, and here he stayed for twenty years. He was beginning to grow old, and he dreaded the thought of becom-



© Keystone View Co.

Fig. 185. Asheville, nestled in the beautiful Blue Ridge Mountains



© Keystone View Co.

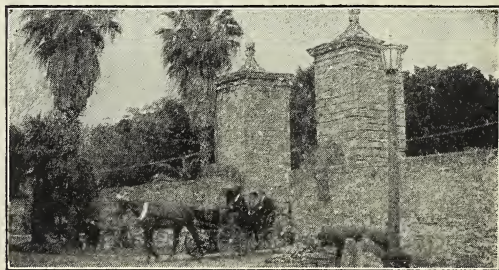
Fig. 186. Such views as this greeted De Leon in his wanderings through Florida.

ing gray, and bent, and wrinkled. One day an old Indian chief said to De Leon: "Far across the waters is a beautiful island covered with lovely flowers, where fruit and game are plentiful. Somewhere in that island there is a fountain of magic water. If one bathes in it, he will never lose his strength; his hair will never grow white, nor his limbs weary."

De Leon discovers Florida. So eager was De Leon to find this wonderful island that he fitted out an expedition to search for it. The party started out on their adventure in three small vessels. After sailing northwest for several days, they sighted land at a place near what was later named the St. John's River. The country was covered with the greenest trees and the prettiest flowers they had ever seen. This, thought De Leon, must be the island the old Indian had told him about. The day they landed was Easter Sunday; and since the Spanish for Easter Sunday is "Pascua Florida," which means "Flowery Easter," De Leon named his "island" Florida.

The land De Leon saw was covered with heavy forests, and there was game of every kind. Deer and wild turkeys abounded in the forests. Black bears fed on wild berries or dug turtle eggs from the warm sand of the beaches. Pumas and black wolves prowled about in search of prey. Mischievous raccoons sat like monkeys on their haunches and washed their food. Rat-like opossums hung from the branches by their long tails. The swamps were full of alligators, lizards, and snakes, and ducks flocked in the lakes and streams. Slow, lazy rivers, more like arms of the sea than rivers, idled along in the dim light under the thick leaves of the trees that almost made roofs above them. It was a land of great plenty, great beauty, and great danger.

The search for the Fountain of Youth. De Leon and his men plunged into the forest to hunt the magic Fountain of Youth. They drank from every spring and bathed in every brook, river, and pond; yet they did not feel any different. They came back to their ships and sailed down the coast and around to the west side of Florida. Along the way they stopped at many places and wandered through the forests, still looking for the magic water that would make them young, or at least keep them from growing any older. De Leon kept up the search for many months, but his hair stayed as white, his skin as wrinkled, and his limbs as weary. Finally he said to his men, "There is no such fountain here; we must give up the search."



James Sawders

Fig. 187. The old Spanish gates at St. Augustine



© Keystone View Co.

Fig. 188. The waterfront at Jacksonville, Florida, an important seaport and railroad center for the northern part of the state

Settlement of St. Augustine. Menéndez, another Spaniard, made a settlement at St. Augustine, Florida, in 1565. This was the first permanent settlement ever made by white men in our country. In spite of the fact that Spain held Florida for over two hundred years, it remained almost the same wild swampy region that it was when Ponce de Leon found it. Today the gate of the old wall that was around the Spanish settlement and a few churches and houses are about all that remain to be seen of the town that the Spaniards built. St. Augustine is an interesting place to visit. It is the oldest town in the United States.

Jacksonville. Since we all like to travel rapidly these days, we will take an airplane for our trip over this state. We shall first fly north to Jacksonville on the St. Johns River. This city was named for General Andrew Jackson who, once upon a time, was a rather rough visitor in Florida. This is the story of

his visit: For years and years the Spaniards and the Indians gave the people of Georgia trouble. Finally Jackson was sent to fight the Indians in Georgia and Alabama. He defeated them badly and chased them over into Florida. Then the United States bought Florida from Spain, and General Jackson was sent there as the first governor.

As we circle over the city, we see many long passenger trains pulling into the station, and thousands of automobiles, looking like so many big black beetles, scurrying along the highways. This is the month of December, and nearly all of the visitors in the city are people who have come to Florida to spend the winter. Only a few days ago they left the snowdrifts in Chicago, Boston, New York, and other northern cities, and now they are wearing light summer clothes.

Winter resorts. Most of these visitors are not staying in Jacksonville. They are going on to Tampa on the west coast, or to



James Sawders

Fig. 189. Overcoats and snow-shovels are in use in northern cities while people enjoy sunshine and sea bathing in the ocean at Palm Beach.



James Sawders

Fig. 190. A palmetto grove in the Everglades

Palm Beach and Miami on the east coast. We go on to Palm Beach, where we see the fine hotels that care for these visitors, and the beautiful winter homes of wealthy people.

Now we fly on down the coast to Miami, which has become one of the most popular winter resorts in the country. There are thousands of people bathing, boating, or fishing in the warm waters for miles along the white, sandy beach; or playing golf and tennis, for this is a vacation land, away from the snow and ice of the northern winter. These winter visitors to Florida are looking for about the same thing that Ponce de Leon was looking for—a fountain of youth. People do not expect to find such a fountain; but they do hope to find in the fresh air and sunshine the magic that will take wrinkles from the face and weariness from the bones.

How Florida was made. A long time ago the peninsula of Florida was just a ridge of rock deep down under the water. How did the ridge become the lovely land of Florida? Most of it was made from dead animals and plants. A great many tiny shell-covered animals live in the sea. There are millions of one kind which live in colonies together, and when one dies, it leaves its skeleton. As more skeletons collect, a rock-like reef or island



James Sawders

Fig. 191. Along the shore of Lake Okeechobee

is built. This animal is the coral. Other sea animals die and drop their shells and bones to the bottom of the ocean, where with the sea plants they form a thick bed of ooze, or mud, on the ocean bottom.

For thousands of years this ooze was washed up on the rock ridge of Florida. Each time some mud stuck to the rock. Sand and clay were also washed up and brought down by rivers that empty into the ocean near this ridge. After a long time the layers of ooze, plants, clay, and sand reached the top of the water, and there was land. The mixture was so heavy that the lower layers were pressed into limestone. So, because of the material from which it is made, and because it is near the ocean level, Florida has many lakes, springs, and some swamps.

The Everglades. Since Florida has much rain, there is always enough water in and under the ground to make many springs and lakes. Much of the land is so flat that the surface water cannot all run off, and this makes swamps. One of these swamps, called the Everglades, is one of the largest in the United States. It covers nearly all of the southern part of Florida.

The Everglades look like a great prairie. They are covered with tall coarse grass that

grows up out of the water, with here and there islands and jungles of trees, where the Seminole Indians have made their homes for years. Where the swamp has been drained, the soil is very rich, and is fine for growing watermelons, pineapples, and many other fruits and vegetables. Canals have been dug from Lake Okeechobee to the ocean. In the rainy season these canals carry off the extra water and thus keep the lake from overflowing and the land along the canals from getting swampy. There are fine truck farms along these canals.

The Florida keys. Look at the map and locate the little islands off the southern coast of Florida. These islands, which the corals have built, are called keys. You see, the corals are still building these islands. Is it not strange that an island can grow? A highway connects the keys with each other and joins Miami and Key West. The city of Key West, which is only ninety-three miles from



© Keystone View Co.

Fig. 192. Locks at Lake Okeechobee

Habana, Cuba, is on the last key, or coral island. Here are many factories making cigars and cigarettes from Cuban and Porto Rican tobacco. On the docks we find great piles of sponges, together with Spanish mackerel, other fish, and oysters, that have been taken from the waters near there. A sponge, too, is the skeleton of an animal that grows on the bottom of the ocean, although it is not hard like a coral (Fig. 193).

Truck farming. So much do the northern cities depend upon this section for winter vegetables, that we might call Florida the winter garden for the northern country. A truck farmer near Miami can grow four crops a year. First he plants lettuce, which he gathers in December or January. As soon as the lettuce is marketed, he plants tomatoes to be shipped in February, and then potatoes to be shipped in March (Fig. 195). After that, he plants velvet beans to feed his mules. So you see that he can have something growing all the time. The beans, besides being a good food, help to fertilize the ground.

The truck farmers farther north ship their vegetables just a little later than the Miami farmers do theirs. In this way the northern markets are always supplied with fresh vegetables. If the Florida farmer has a late crop, he loses money; for then the crops in the re-



Courtesy Key West Chamber of Commerce

Fig. 193. The sponge on this boy's head is the largest ever found in the waters around Key West.



James Sawders

Fig. 194. An orange tree with its golden fruit

gion to the north are ready and cost less to ship. Miami's crops are shipped early, and then, in succession, those of Tampa, St. Augustine, Savannah, Charleston, New Berne, and Norfolk. Each of these cities ships about three weeks later than the one to the south. Lettuce, tomatoes, cantaloupes, peas, beans, potatoes, celery, onions, and cabbage are grown.

Citrus fruits. Oranges have been grown in Florida for over 350 years. The Spaniards planted them at St. Augustine when they first came. Lemons, limes, and grape-fruit came later. Many of the oranges, limes, grape-fruit, and lemons that we eat every day are grown in Florida. The orange region lies across the central part of the state. To the north, frost may destroy the trees; to the south, the great swamp of the Everglades lies.

Pineapples, bananas, and other fruits are grown in great quantities in Florida as are also some nuts, such as pecans.

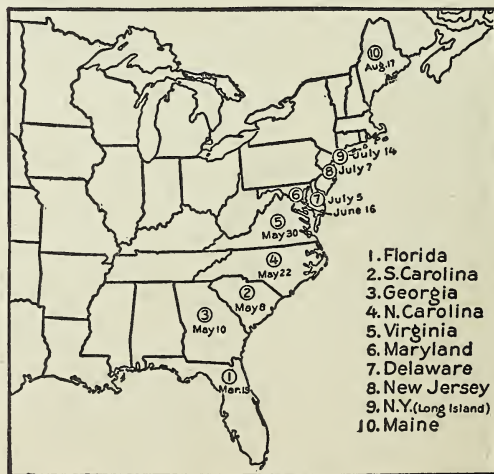
Lumbering. You noticed as we flew along the eastern side of Florida, and then across

the state to Tampa, that we sometimes rode for miles and miles over dense forest. So we know that Florida produces some of the lumber of the country. Jacksonville ships some lumber; but Tampa, Fernandina, and Pensacola are centers for a large lumber industry. The lumber produced in this section is pine, cypress, sycamore, gum, and hardwoods.

Florida's mines. De Soto found no gold mines in Florida. Indeed, had he but known, there is neither gold, silver, iron, nor coal in Florida. But Florida does have mines—phosphate mines. Phosphate is a rock that is found just under the soil in Florida. Steam shovels strip off the dirt, and the phosphate is then dug out. It is sent to a mill, or factory, where it is ground up and made into fertilizer, or plant food. Florida and Tennessee furnish nearly all of the phosphate in the United States. Tampa is the principal shipping port. Tampa also manufactures many cigars and cigarettes, made mostly from Cuban tobacco.

QUESTIONS TO ANSWER

1. Which of the South Atlantic states is entirely in the Coastal Plain? 2. What are the important seaports of the South Atlantic states? 3. What in-



U. S. Department of Agriculture

Fig. 195. When potatoes are ripe along the Atlantic coast

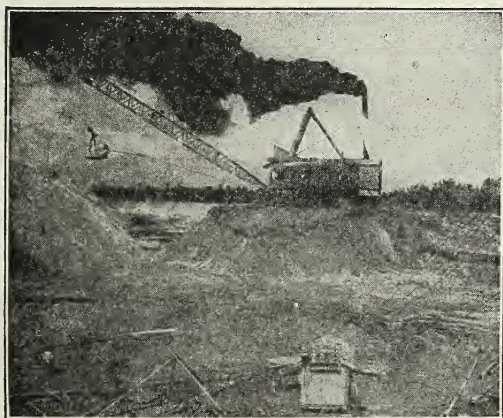
dustry, important in the New England states, do you also find important in certain South Atlantic states? Why has it become important in these states? 4. Locate the Fall Line on the colored map. Locate the cities mentioned as on the Fall Line. Why did those cities grow there? 5. Locate the Great Smoky Mountains, Mt. Mitchell, and Mt. Guyot. 6. Describe the three kinds of country found in the South Atlantic states.

7. How was Florida made? How did it get its name? 8. What rivers are there? What lakes? 9. Why should Florida have so many swamps? What is being done with the swamps? 10. What two things bring gold to Florida? 11. Why should Florida be such a good winter resort?

12. What is meant by the "growing season"? Tell how it is different along the Coastal Plain. 13. In what citrus fruit does Florida lead? 14. Which part of Florida produces the lumber? 15. Has Florida any mines? For what is the product of these mines used? 16. Trace two railroads that carry produce and people from Florida to New York. The railroad map is on page 374.

THINGS TO DO

1. Try to draw a picture of oak trees with Spanish moss. 2. On an outline map of the South Atlantic states label the three main divisions of the country. Show the Fall Line and the cities mentioned in the book. Draw eight or ten rivers to show in which direction the water flows. Locate the Great Smokies, Mount Mitchell, and Mt. Guyot.



Visual Education Service

Fig. 197. In a Florida phosphate mine. The steam shovel strips the dirt from the rock.



James Sawders

Fig. 196. Cypress sawmill in Palatka, Florida

Show the principal seaports, and in their proper places write: oranges, forests, truck farms, and peaches. See if you can decorate the sides of your map with pictures of the fruits and vegetables of this region. Show two railroads that ship these products. 3. Make a list of the vegetables that are shipped.

4. In your magazines and newspapers at home try to find advertisements of the cities of this region and be ready to tell in class what they say. 5. Choose sides and have a match to see which side can tell correctly for what each city in this region is noted. Use the table of South Atlantic cities in the back of the book (page 469).

Books to read: Allen, *Geographical and Industrial Studies, United States*, pp. 89-109; Bailey, *Boys and Girls of Discovery Days*, pp. 80-91; Barrows-Parker, *United States and Canada*, pp. 140-141; Branom and Ganey, *Western Hemisphere*, pp. 76-77; Carpenter, *The Foods We Eat*, pp. 87-94; Evans, *America First*, pp. 15-17; Hubbard, *Little American History Plays for Little Americans*, pp. 13-16; Jordan and Cather, *High Lights of Geography*, pp. 117-124; Lefferts, *Our Own United States*, pp. 103-109; Nida, *Following Columbus*, pp. 59-61; Pitkin and Hughes, *Farm and Field*, pp. 137-153.



From a French print. Courtesy Chicago Historical Society

Fig. 198. On July 3, 1534, Jacques Cartier sailed into the St. Lawrence River.

THE GREAT LAKES REGION

THE FRENCH COME TO THE NEW WORLD

CHAMPLAIN, FATHER OF NEW FRANCE

The French come to America. Long before John Smith saw Pocahontas or Henry Hudson sailed into New York Bay, French fishing boats had been coming to the shores of Newfoundland, and Cartier, a French explorer, had already sailed up the St. Lawrence River. The French, too, were hunting for a passage to India and China, but on account of swirling rapids, Cartier could go no farther up the river. He named these rapids "La Chine" or "The China" rapids and turned back to the sea.

The fishermen and these first explorers told the people of France many strange stories about the new country. A sailor's son who lived in northern France listened eagerly to these tales of a strange, new land and treasured them all in his memory until he became a man. Then one day he set sail for America to see what he could find. That sailor boy was Samuel de Champlain.

On his first trip Champlain sailed into the Gulf of St. Lawrence and up the St. Law-

rence River looking for a place to settle. But he did not find a place that suited him; so he went back home. The next year he came again. This time he went along the coast to the south, still looking for a good place to make a settlement. He sailed into the Bay of Fundy, visited the spot where Halifax now stands, explored southward along the rocky coast of Maine, and went down to Massachusetts Bay. He was not yet quite satisfied; so again he returned to France.

The founding of Quebec. The next year, 1608, the year after the Jamestown colonists landed, Champlain made his third trip to America. He brought some other Frenchmen with him this time, and they sailed up the St. Lawrence River until they came to a very narrow place in the stream. The Indians called this place Quebec, the Indian word for "narrow." This place suited the French; so they settled here, and named their settlement Quebec.

The French help the Indians. The Indians were astonished at the guns the French-

men used. When they saw that these weapons would kill people, they asked Champlain to help them fight their enemies, the Iroquois, in the country to the south. Champlain agreed to help them, took command of the war party, and they started on their long, hard trip. They rowed up the St. Lawrence to the Richelieu River and then up the Richelieu, Champlain in his own boat and the Indians in their canoes. But before long Champlain saw that he could go no farther in his heavy boat; so he sent it back by some of his men and went on with the Indians in their canoes.

They soon came to a long, narrow lake, on which they paddled for several days. The scenery was beautiful. Off to the left were mountains so thickly covered with evergreen trees that Champlain called them the Green Mountains. To the right were mountains looking dark blue in the sunlight; these the Indians called the Adirondacks. They were on Lake Champlain. Champlain wanted to explore the country around this lake, but the Indians were eager to attack the Iroquois, and urged him to hurry on. You remember



Courtesy Glens Falls Insurance Co.

Fig. 199. Champlain's "thunder stick" killed three Iroquois and terrified the others. The Iroquois never forgave the French.

that these Indians, the Iroquois, or Five Nations, lived in the country around the Finger Lakes and the Mohawk Valley in central New York. Soon they met a party of Iroquois braves, who fled in terror when Champlain fired. This made the Iroquois bitter enemies of the French ever after.

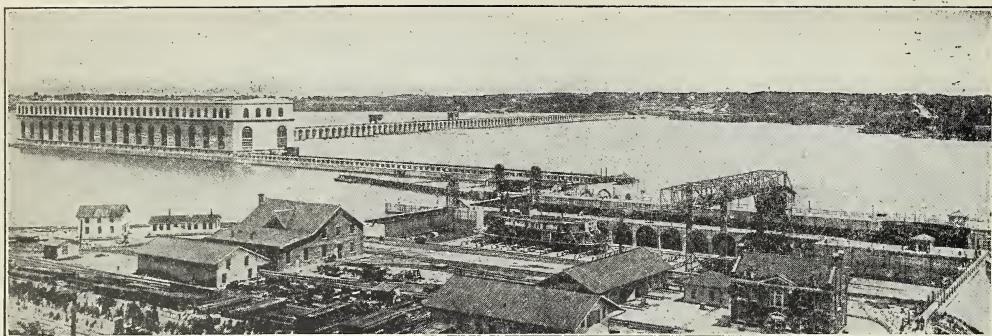
To Champlain, America was a land of many charms. He made his home in this country for nearly thirty years, until his death. However, he visited France nearly every year during this time. He was so deeply interested in the new country that he even wanted to help the Indians; so he asked that priests be sent to America to teach the red men and to help them. Champlain came to be called the Father of New France.

The French did not make many settlements, but they explored much of the country. They traveled up the Great Lakes as far as the head of Lake Huron. We are not sure that in Champlain's time they explored Lake Superior. We do know, however, that they established a fur-trading post far to the west of Quebec at a place near where three of the Great Lakes almost come together, on what we now call the Straits of Mackinac. Turn to the map on page 133 and find these straits.



By Ewing Galloway, N. Y.

Fig. 200. Statue of Samuel de Champlain, at Quebec



By Ewing Galloway, N. Y.

Fig. 201. Where the Des Moines River flows into the Mississippi from the west, Marquette came to a long rapids. Today he would see there the city of Keokuk, Iowa, and a great dam nearly two miles long across the river. As the waters rush through certain parts of the dam, they turn great dynamos that furnish electricity to towns for miles in all directions. Even St. Louis, 145 miles away, uses this power.

MARQUETTE AND JOLIET

Exploring the "Father of Waters." One of the finest and best of the French priests who came to America was Father Marquette. He gave his life to helping the Indians. He lived among them, and they became his friends. The Indians had told the French many wonderful tales about a great river, the Mississippi, called the Father of Waters. In 1673, while Father Marquette was living at Mackinac with his Indian friends, the governor of Canada sent him and a fur trader named Louis Joliet to explore the Mississippi to its mouth. "If this stream leads to the California Sea," said the governor, "we shall have a water route to China."

So with five other Frenchmen and some Indian guides, Father Marquette and Joliet set out in birch-bark canoes. They first made their way to Green Bay, in the present state of Wisconsin. From this bay they paddled into the Fox River, carried, or portaged, their canoes around a long stretch of rapids and falls, and followed the river up to its source. Then their Indian guides led them a few miles through swamp and prairie land over to the Wisconsin River. They followed this river to its mouth, and just a month from the day they started they floated out on the broad waters of the Mississippi River. See

if you can follow, on the map on page 133, the route that Father Marquette followed from Mackinac to the Mississippi.

Down the Mississippi. Down the great stream they paddled and floated, past beautiful wooded hills and sunny grasslands, or prairies as the French called them. For days they saw no signs of human life, but deer and buffalo were plentiful. At last they came to an Illinois Indian village. The Indians greeted them in a friendly way, and feasted them on their greatest delicacy, dog meat! The Indians also smoked the peace pipe, or calumet, with the Frenchmen, in sign of friendship. Father Marquette always made friends among the savages because he understood them. Besides, he was honest and unselfish in his dealings with them.

When Father Marquette told the Indians that he hoped to follow the Mississippi to its mouth, they warned him not to go any farther, for fear of the warlike tribes that lived farther south. When they saw that he was determined to go in spite of their warnings, they gave him a calumet to show to any Indians he might meet.

The party soon came to the mouth of the Missouri River, where St. Louis now stands; and here their canoes were nearly swamped by the muddy waters of the Missouri as they

poured into the Mississippi. Several days more and they came to the mouth of the Ohio River, which flows into the Mississippi from the east, as you know. Here they found another Indian village. Father Marquette showed the savages his calumet, and they invited the Frenchmen to land.

The explorers went on down the Mississippi, past the high bluffs where Memphis now stands, as far as the mouth of the Arkansas River. Here they were attacked by unfriendly Indians. Father Marquette held aloft his calumet, but the Indians paid no attention to it. Finally an old chief caught sight of it and stopped the fight. These Indians told the French that the Mississippi River flowed into the Gulf of Mexico and not into the Pacific Ocean. They said that it was surely the same river the Spaniard De Soto had discovered farther south many, many years before. They also warned Marquette of savage tribes who had guns that the Spaniards had sold them.

The return journey. Marquette now decided that they would go no farther. He feared that they might be attacked by un-



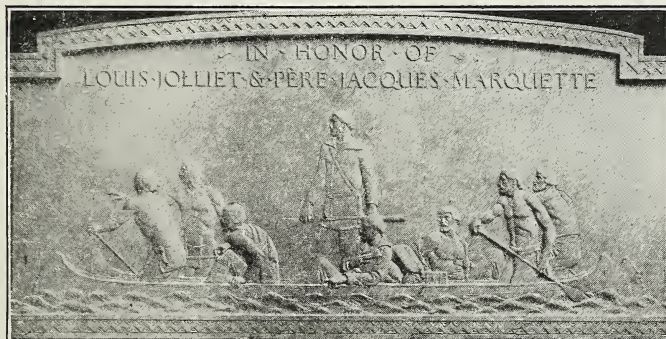
Courtesy Central Trust Co.

Fig. 202. Father Marquette's winter headquarters at Chicago

friendly Indians or captured by the Spanish, and he was anxious to get back and report what he had discovered. The party started back up the river. When they reached the mouth of the Illinois, they paddled up that river. We do not know exactly what route they took from the Illinois, but they made the portage either to the Chicago River or to the Calumet, and reached Lake Michigan at, or near, the present site of Chicago.

Father Marquette and his party were probably the first white men to explore this beautiful country of the Mississippi Valley. Four months from the time they started, they were back in Green Bay. They had traveled more than 2500 miles over strange waters in their frail little canoes.

The mission at Kaskaskia. The next year Father Marquette was given permission to found a mission for the Illinois Indians. With ten canoes he paddled along the west shore of Lake Michigan to the Chicago River. Here he became so ill that the party was unable to go on; so they built a hut at the mouth of the river and stayed all winter.



Courtesy Chicago Historical Society

Fig. 203. Bronze plate on the Michigan Avenue bridge, Chicago, placed there in honor of "The first white men to pass through the Chicago River—September, 1673."

By spring Marquette was able to go on. They paddled up the Chicago, portaged to the Des Plaines River, which flows into the Illinois, and followed the Illinois down to the Indian village of Kaskaskia, near Utica, Illinois. Here Father Marquette built his mission.

Father Marquette's death. After Father Marquette had his mission well started, he became very ill, and his men started back to Canada with him. But the great missionary and explorer died before they had gone far. His men buried him near the Marquette River, where Ludington, Michigan, now is. Later, some of the Indians who loved him carried his body to Mackinac and buried him beneath the floor of the little mission chapel he had built there.

ROBERT DE LA SALLE

A missionary and a soldier. Of all the missionary leaders who came to America, La Salle was the greatest. He was educated as a priest, but he was so fond of adventure that he became a soldier. His older brother, who had been in America, told him many interesting stories about the new country and the Indians. When La Salle was twenty-three years old, he decided to come to America to see for himself. As a soldier of France, he was interested in winning the new country for France. As a man who had studied to be a priest, he preached to the Indians and tried to convert them to the Christian religion.

La Salle explores the Ohio. For a few years La Salle spent all his time in exploring. On one trip his Indian guide led him to the Allegheny River. He followed this river until he came to the place where it joined with the



Visual Education Service

Fig. 204. Robert de La Salle

Monongahela to make the Ohio River. Down the Ohio they paddled until they came to a falls. What a different country La Salle saw from what we see today! There was no city of Louisville near those falls, and farther up the river where Cincinnati now stands were only high forest-covered hills. It was not until a hundred years later that Pittsburgh was to begin as a little village where the Allegheny and Monongahela rivers join to make the Ohio River.

La Salle's plans. The Indians told La Salle of rivers away to the west, which

flowed through dense forests and through prairies as level as the floor for hundreds of miles. One mighty river of which they told, La Salle thought must be the Mississippi. It might flow into the Pacific Ocean. When Father Marquette brought word that it did not flow into the Pacific, La Salle decided to explore it and to claim it for France. So he asked the king for permission to trade in furs and to build forts along any rivers he might explore. He asked also for priests to preach to the Indians. The king granted La Salle's wishes. For five years he was to have the sole right to buy furs and to trade with the Indians.

La Salle had a good friend in Frontenac, the governor of Canada, who built Ft. Frontenac where Kingston, Ontario, now stands. Traders settled around this fort until the settlement was the largest in that section. Friendly Indians came long distances to trade, and La Salle, who was in command of the fort, was becoming rich. But money was not La Salle's greatest wish. He dreamed of the great river to the west and determined to explore it clear to its mouth.

Preparations for exploring the Mississippi. Before La Salle could start on this trip, he had to go to France for supplies—things he needed in trading with the Indians. When he returned, he brought his friend Henri (or Henry) de Tonti with him, for he knew that he needed a faithful and true friend on such a long and dangerous journey. Tonti had an iron hand to take the place of one he had lost in battle; so he became known as Tonti of the Iron Hand.

La Salle sent his men to build a fort on Lake Erie, where the Niagara River flows from the lake. Then a ship was to be built to carry their party on the journey up the lakes and to bring back the furs obtained along the way. The furs were to be sold to pay the expenses of the trip. Tonti was in charge of building the ship, the *Griffin*.

The start for the Mississippi. Some of La Salle's men threatened to kill him because they were afraid to go on such a long journey. But La Salle paid no attention to their threats. He was a man who usually finished what he had once started. He joined de Tonti, and they loaded the *Griffin*. Up Lake Erie they sailed, through the Detroit River to Lake Huron, north on Lake Huron and through the Straits of Mackinac into Lake Michigan. They traded for furs all along the way, and at Green Bay the *Griffin* was sent back with its load. The party now divided. One group crossed the lake and went down the eastern shore. The other group followed the western shore. They finally came together at the mouth of a river on the eastern shore of Lake Michigan. Fort Miami was built where St. Joseph, Michigan, now stands.

Down the Illinois. The men had grumbled when the ship sailed away and left them alone in the woods. They had

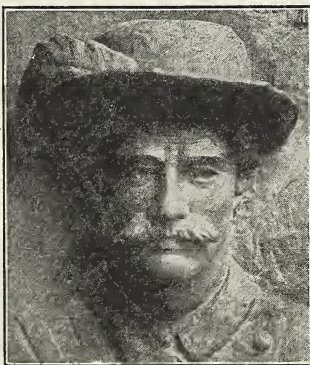


From a French print. Courtesy Chicago Historical Society

Fig. 205. The building of the *Griffin*

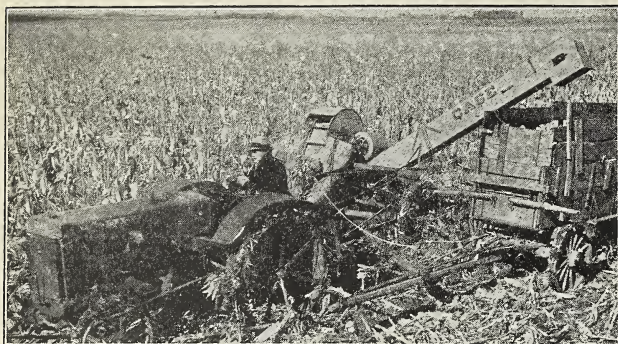
thought they would travel all the way on the ship. In spite of the grumbling of the men the little party started out and made its way to a bend of the river at whose mouth they had landed. Here, where the city of South Bend now stands, they took their canoes from the water and carried them overland to another little stream that flows west across the prairies into the Illinois River. As they floated down the Illinois, they came to a large Indian village, deserted for the time, which had nearly five hundred lodges. Farther on was a village of about eighty wigwams, on both sides of the river. As he was not sure the Indians were friendly, La

Salle formed the canoes in line, abreast across the river, and paddled right down to the village. All the Indians came out to see the white men. La Salle took out his peace pipe and began to smoke it. When the Indians saw this, they were friendly and asked La Salle and his men to stop and eat with them. They had roast duck and corn mush, which the white men much enjoyed. This Indian village was near the



Courtesy Chicago Historical Society

Fig. 206. Faithful Tonti



Courtesy J. I. Case Co.

Fig. 207. Today along the Illinois La Salle would see broad fields of corn, for he was in the heart of what is now the great corn-growing region of our country. This farmer is harvesting corn. The machine drops husked ears into the wagon which the tractor tows.

place where Peoria now is. La Salle built Ft. Crèvecoeur on the opposite bluffs.

The white men spent a few days in the village, but La Salle soon became restless. He told the Indians that he wanted to go down the Mississippi River till he found its mouth. They urged him not to go. They said they would not go themselves, not even to hunt, for they had heard of great monsters that would swallow anyone who tried to go down the river. At the mouth of the river, they said, the canoes would float right out into a bottomless place and sink out of sight. La Salle, of course, knew that this was all nonsense, but some of his men believed it and refused to travel any farther. They even tried to poison La Salle.

A return to Frontenac for supplies. For the trip down the river La Salle decided to build a boat and also to go back to Fort Frontenac on Lake Ontario for more supplies. So he left De Tonti at the village to build the boat, and with a few men started back to Fort Frontenac. A part of the way they used canoes, but most of the thousand-mile journey they walked. Just close your eyes and picture the hard trip they had.

Imagine how different the country is now, with its farms, railroads, towns, and big cities. Even when La Salle reached Fort Frontenac, his troubles were not over. He now learned that the *Griffin* with all of the furs had been lost; so he could not pay the debts he owed. Besides all this, word was brought to him that the men he had left with De Tonti had destroyed the boat which they were to build and had deserted Tonti. Most of us would have given up trying; and no doubt La Salle was often tempted to do so, but he never gave up. He made up another party of French and Indians and went back to Illinois. The village had been destroyed in an Indian war and De Tonti was gone. After a long search La Salle found him at Mackinac.

Down the Mississippi. Again, although it was winter, La Salle and Tonti with a few others started out. This time they went down to the Chicago River as Marquette had done. The river was frozen solid, so they dragged their canoes over the ice on sledges up the Chicago and down the Illinois until they came to open water (Fig. 208). In a few days they reached the mouth of the Illinois, and La Salle saw the river of his dreams—the mighty “Father of Waters”—the Mississippi.



Courtesy Chicago Historical Society

Fig. 208. The explorers drag their canoes over the frozen waters of the Chicago and Illinois rivers. This bronze plate is on the Michigan Avenue bridge over the Chicago River at Chicago.

The little party paddled and floated down the Mississippi past the Missouri, the Ohio, the Arkansas, the Red, and other smaller rivers. There was no St. Louis then, no Cairo, no Memphis, nor any other city. Finally after many days they came to a place where the Mississippi divided into three parts. A little exploring showed them that each of these branches flowed into the Gulf of Mexico, only a few miles away. They had come to the mouth of the mighty river. Here, on a little hill, La Salle planted a cross and the French flag. He claimed for France all the country drained by the Mississippi River and its branches. The maps facing page 1 and on pages 16 and 17 will show you what great part of our country is drained by the Mississippi and the rivers that flow into it. He named all this land Louisiana in honor of King Louis of France.

The death of La Salle. Even though La Salle had explored the Mississippi to its mouth, he was not satisfied. He wanted to build a fort and start a settlement to show that France really owned this territory; so he went back up the river the way he had come, and on to France to lay his plans before the king. De Tonti was left to build a fort at the mouth of the Arkansas River. La Salle was to return with settlers by way of the Gulf of Mexico, and meet De Tonti at the mouth of the Mississippi.

La Salle sailed safely across the ocean and back, and even through the Gulf of Mexico. But in some way he missed the mouth of the Mississippi, and landed in what is now Texas. Two of his ships were wrecked, and the third had returned to France; so the men had to start walking across the country to find the Mississippi and De Tonti. Weary and discouraged, and blaming La Salle for their troubles, some of the men rose against him and killed him. Thus ended the life of the greatest of the French explorers. He had



From the painting by De Thulstrup

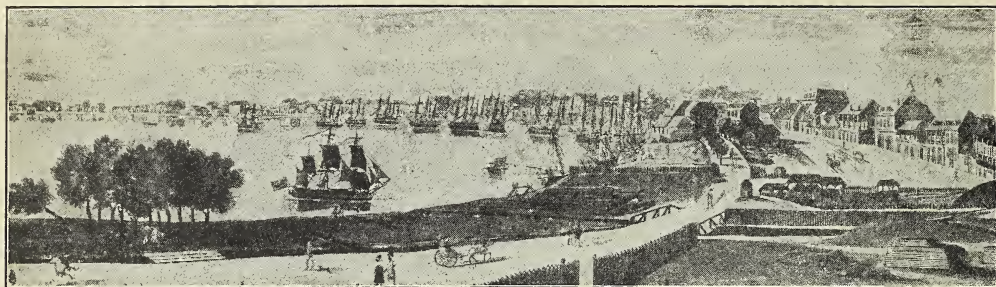
Fig. 209. La Salle claims the Mississippi Valley for France.

explored and claimed for his king a territory many times larger and richer than the Mother Country. Faithful Tonti made a number of trips down the river in search of his leader, and tried to carry on the work of settlement. Finally he joined the French settlers near the mouth of the Mississippi.

FRENCH SETTLERS AND FUR TRADERS

The founding of New Orleans and Mobile. La Salle's deeds stirred the spirit of adventure in other Frenchmen. Among them were two brothers born in Canada, Pierre and Jean Le Moyne, better known by their other names—Iberville and Bienville. They determined to carry out La Salle's plan of making settlements along the Mississippi.

In 1698 those two brothers and 200 followers, with Iberville in command, sailed from France. After leaving the colonists at Mobile Bay, they followed La Salle's route



Courtesy Louisiana Historical Society

Fig. 210. New Orleans soon grew to be an important French city in the New World. From this picture what was an important business of New Orleans even in those early days? Now look at Fig. 403, page 271.

up the Mississippi and sailed against the muddy current for many miles up the river. They knew they were following the path of La Salle when an Indian gave them a letter Tonti had left fourteen years before.

Not finding a place he liked for settlement on the river, Iberville built Ft. Maurepas on the Gulf, where Biloxi, Mississippi, now is. He left his colonists there. The next year he built a post on the Mississippi near the present site of New Orleans. In 1701 he moved most of the colonists to Mobile and was governor of the colony for several years. Then his brother, Bienville, became governor and in 1718 founded New Orleans. France now held the St. Lawrence-Great Lakes region and the Mississippi River Basin—land extending from the mouth of the St. Lawrence to that of the Mississippi.

The early French fur traders. You remember that the Frenchmen who came to America were fur trappers and traders, and not farmers. French trappers were called Runners of the Woods. Along the rivers and lakes wherever game was plentiful, they made camps. When the game at a place was gone, the camp was moved. Usually the men went into the woods in the fall and did not come out again until spring. You see, furs are thickest and best in winter. The men often lived alone for years at a time. Some of them married Indian squaws. As the years went

on, these French trappers pushed farther and farther west beyond the Great Lakes. They even went across the Dakotas, Montana, and Wyoming as far as the Rocky Mountains.

Routes to Montreal. For some time Quebec was the central trading-post, but later Montreal became the fur center for all of New France. You have read how Cartier found and named the Lachine Rapids in the St. Lawrence just above Montreal, and you know about Niagara Falls, which have rapids below them. Because of these rapids and falls, the trip to Lake Huron and Lake Superior by way of Lake Erie was not only a long but a hard journey. Study the map (page 133), and you will see why many traders and trappers who wished to go to Lake Superior went up the Ottawa River to a point opposite Lake Nipissing, carried their light canoes across to that lake, paddled down the French River to Georgian Bay, and then into Lake Huron. We know that La Salle did build a boat on Lake Erie and that he always went up the lakes by way of Lake Ontario. But it was hard work to carry the cargoes around the rapids and falls.

Trading-posts and forts were built at Fort Frontenac (now Kingston), Niagara, Toledo, and Detroit; and also at Mackinac, where three of the Great Lakes nearly meet. For a long time Mackinac was the post farthest west. The fort at Detroit was built in 1701 by a Frenchman whose name was Cadillac.



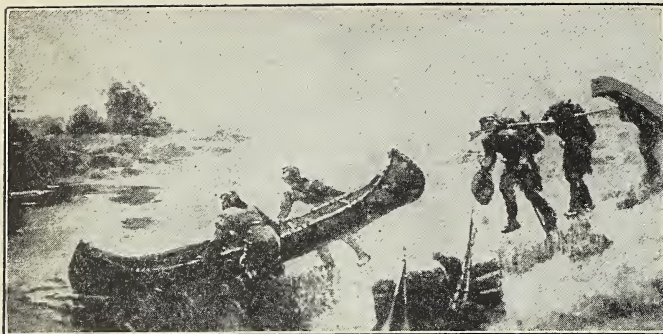
Fig. 211. Map of the Great Lakes region

Early each spring the Indians and trappers started on their long trip down the lakes and rivers to carry their furs to Montreal. Those at Mackinac started out first. More joined them as they paddled across Lake Huron to Georgian Bay. Others from the country away to the north of Lake Nipissing joined, and their fleet grew larger and larger as they paddled on down the Ottawa River. Then there was always the fleet from around Detroit and Lake Erie, which carried its load around Niagara Falls, paddled across Lake Ontario, and shot the rapids above Montreal. Here at Montreal the combined fleets made a great camp. The traders and trappers spent two or three weeks in feasting, visiting, trading, and sometimes even in fighting. When the furs were sold and the next year's supplies bought, the trappers loaded their canoes and paddled away into the wilderness for another long year of trapping.

How the Great Lakes were made. Thousands of years ago the weather was very cold

all year around in the northern part of the United States and in all of Canada. The snow did not melt from one year to another; it piled up until it was hundreds of feet deep, and became so heavy that the whole mass was made into ice, hundreds and even thousands of feet thick. If you had gone to the South Pole with Admiral Byrd, you would know just what this great ice sheet looked like.

Then that great glacier, or mass of ice, began to move. It moved slowly south over Canada, gouging out great holes and filling up other holes as it went along. The ice reached nearly as far south as the Ohio River. When the ice melted, there was a great amount of water, which filled the holes dug by the glacier and formed lakes. The largest of these are the Great Lakes. There are thousands of smaller lakes in Canada and in the states around the Great Lakes. A number of times through the ages the climate changed, and the great continental ice sheet advanced and retreated.



Courtesy Chicago Historical Society

Fig. 212. The end of the portage. The rivers were the roads for the trappers and explorers. It was hard work to portage around a falls or from one stream to another.

The glacier melted gradually to the north, and at different times the water from the Great Lakes region flowed out in different directions. For awhile water from Lake Michigan, and later water from Lake Superior, flowed south to the Mississippi. About this time water from the western part of Lake Erie ran into the Ohio by way of the Wabash River. Later, as the ice melted even more, the outlet for all the lakes was the Mohawk Valley and the Hudson. When all the region was free from ice, the water from the Great Lakes found a new channel to the sea—the St. Lawrence River.

Niagara Falls were formed in the glacier age, at a high limestone cliff over which the water tumbled. The force of the falling water has cut the cliff back until now Niagara Falls are miles back from the spot they once were.

QUESTIONS TO ANSWER

1. On the map of North America (page 10) trace the places that Champlain explored on his trips. 2. When Champlain settled Quebec, where had the English already settled? 3. What other two places that we have studied were settled soon after Quebec? 4. Give a good reason why the French traded with the Indians instead of farmed. 5. Name five lakes that the French traders and priests found. What falls? 6. Locate five large cities that those traders and explorers would see along the lakes today. 7. On what rivers did Father Marquette travel? Locate them on the maps (pages 16-17 and

133). 8. Through what states did he travel on the way south? He passed the mouths of two large rivers. Name them.

9. On the wall map trace La Salle's journey down the Allegheny and Ohio rivers. 10. What right did the king of France give to La Salle? Why did he build a fort on the Niagara River? 11. Why was it good business to build a ship to take them to the head of Lake Michigan? 12. Locate Joliet and Peoria. 13. What finally happened to La Salle? 14. Where did the French make settlements in the

south? What land did La Salle claim for France?

15. Where did the fur traders and Indians bring their furs in the spring? How did they make the journey? 16. What obstacles in the rivers troubled those who came by way of Lake Erie? How do you think boats get around those obstacles today? 17. What kind of weather was it in North America when the great glacier or ice sheet was made? 18. How did the glacier make the Great Lakes? 19. Explain how the Niagara Falls were made.

THINGS TO DO

1. Locate on the map of North America the settlements made in 1565, 1607, 1608, 1620, 1623, and 1682. Also trace the routes taken by Marquette and La Salle up the lakes and down the Mississippi River. Do the same on your wall map for the class. As you trace and locate the places, tell the class about the journeys and the places.

2. On an outline or sketch map of North America locate the same places and journeys that you did on the wall map. Write in the names of the places, rivers, and lakes mentioned. From the point where the boundary line between Georgia and Florida meets the Atlantic coast, draw a line westward to the Pacific. Draw another line from where Maine and New Brunswick meet on the coast straight westward. Write English across the land in between the two lines. Draw a line from Nova Scotia west to near Lake Ontario, around the southern border of the Lake and then along the western side of the Appalachian Mountains to the Gulf of Mexico. Label all the country north and west of that line New France. What can you see about the land claims of England and France?



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Fig. 213. A lumber camp in the north woods. For many years oxen were used to haul the sleds.



© Keystone View Co.

Fig. 214. Besides horses, gasoline tractors and trucks now do much of the lumber hauling.

THE GREAT LAKES REGION TODAY

FORESTS AND LUMBER

The white pine forests. By the time the French came, thousands of years after the ice age, the whole Great Lakes region was covered with heavy forests. And it was here, on the shores of the lakes made by the ice sheet, that the Indian built his wigwam and the trapper hunted for animals. These forests are mostly white pine, and they stretch all the way from Minnesota to Maine. Sometimes they are called "mixed forests." That is because of the maple, birch, beech, ash, hickory, and hemlock trees that also grow here. Much of this fine forest has been cut, and fires have destroyed thousands of acres of trees. As you travel through the country, you will see acres and acres of blackened stumps, sad reminders of the fine forests that once covered the land.

Logging. For years logging was an important industry in the lake states. Millions of feet of lumber were made every year from the trees of the section. Houses, furniture,

and a great number of other things that we use all the time were made from this lumber. Nowadays the region has been cut over and burned over to such an extent that logging is not as important as it was, but some is still done.

There are many men who work at logging. They are usually called lumberjacks. Maybe you have heard stories about Paul Bunyan, a legendary lumberjack with great strength who was supposed to have lived in the logging regions of the Great Lakes and the Northwest.

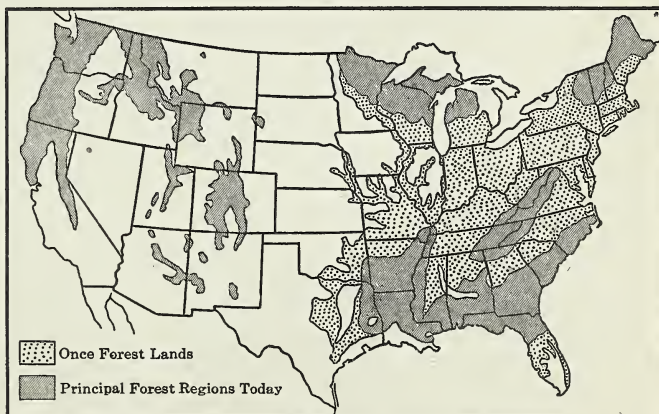


Fig. 215. Where are the main forest regions of our country today?



Fig. 216. Driving logs down the river to the sawmills and the railroads. These logs are piled in a jam.

The lumberjacks live in camps which are built in the center of the forest where the trees are to be cut. The houses in the camp must be warm, for the winters in the northern woods are long and cold. After the trees are felled and cut into logs, they are hauled to the railroad or river.

In this section logs are usually taken to the sawmills by trucks, railroads, or boats on the river, but they used to be floated down the river. This was called log driving, and it is still done occasionally. Sometimes the logs catch on something in the river and the current piles them up. This is called a jam. You may have read stories of lumberjacks working on dangerous jams.

The sawmills used to be built near waterfalls whenever possible so that the water-power might be used for running the mills, but electric power is now used most of the time. Heavy chains are stretched across the river to catch the logs as they come floating down the stream. Then these logs are taken into the mill and sawed into lumber. The lumber is shipped to the manufacturing cities, mostly by railroad. Some, however, still goes by boat down the lakes and rivers. Duluth and Superior are large lumber-shipping centers in the lake states. Much of this lumber is sent to Grand Rapids, Michigan, which is one of the greatest furniture-making cities in the world. Find Grand Rapids on the map.

A vacation land. The forest and lake country of Michigan, Minnesota, and Wisconsin is a fine place to spend a vacation, and every summer thousands of people go to the northern part of the lake states to camp, hunt, and fish. The United States Forest Service builds roads and marks camp sites. The Service gives tourists other help, too, and tries to teach the people to help in taking care of the public forests.

IRON-ORE MINING

The Mesabi iron range. The upper peninsula of Michigan and the region around the western end of Lake Superior produce more iron ore than any other region in the world. You probably think of a mine as being deep in the earth, where the ore must be blasted out. Here in the Mesabi iron range

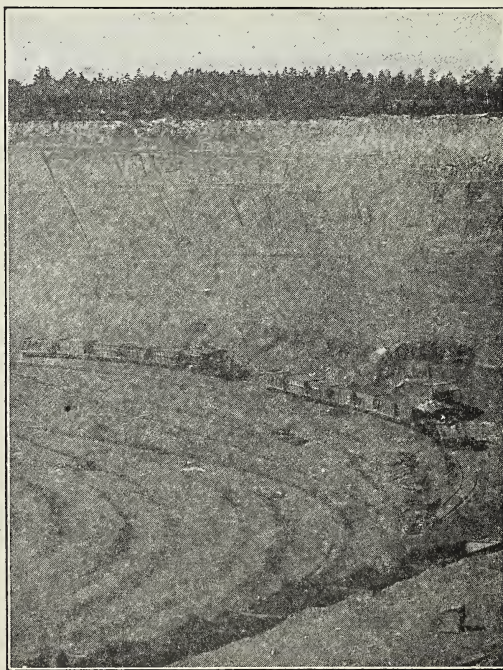
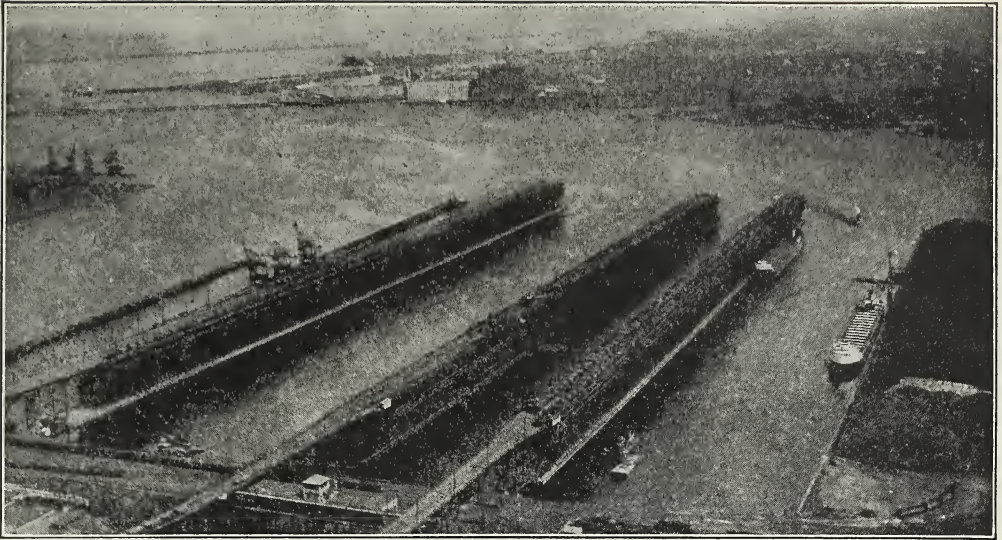


Fig. 217. A Mesabi range open-pit mine

Visual Education Service



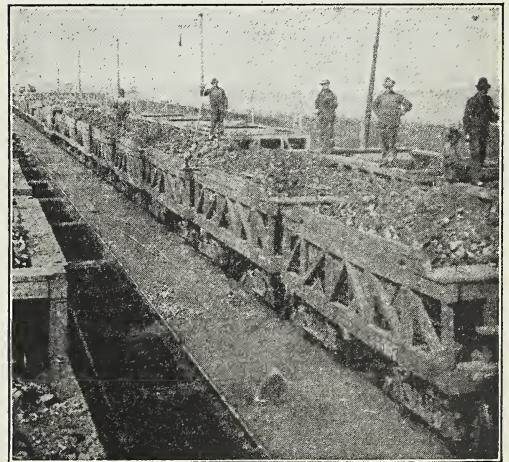
Courtesy Duluth Chamber of Commerce

Fig. 218. Iron-ore docks, or trestles, in the harbor at Duluth. Across the harbor is Superior, Wisconsin.

north of Duluth the reddish-brown ore is scooped up like dirt by great steam scoop-shovels so large that one of them can pick up several tons of ore at a time. The ore is only a few feet below the top of the ground. This kind of mining is called open-pit mining. Study the picture (Fig. 217). The hole, or pit, becomes so big that trains of empty freight cars wind around and down into the bottom of it to get their loads of ore. They look like toys from the top of the pit. When the trains are loaded, they wind slowly around and up out of the pit and steam away with their loads to Duluth or Superior, eighty miles away.

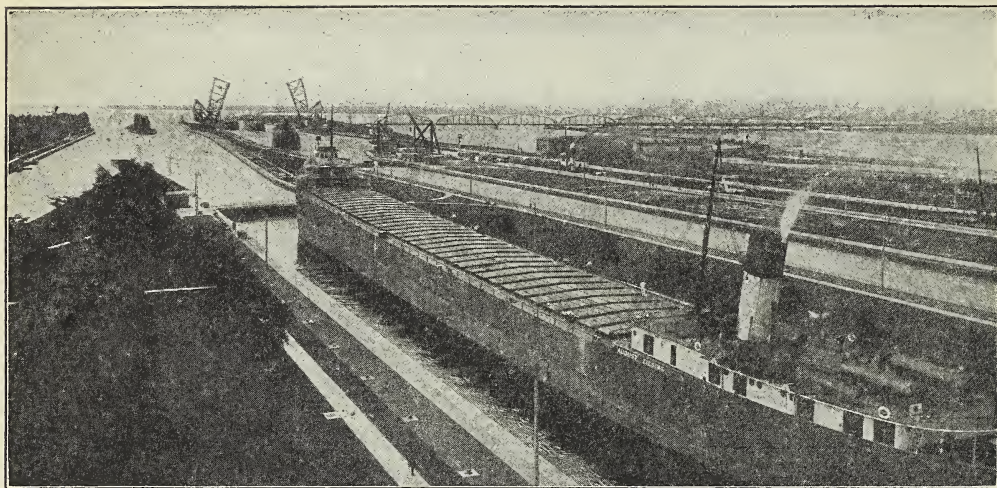
The ore docks. When the ore trains reach the cities, they are run out on the docks on a trestle built over what looks like a two-story shed (Fig. 218). The upper story is really only a big bin to hold the ore. Then a trainman pulls a rod on each car; this lets the bottom of the car drop down, and the ore runs into the bin. The dock and the shed are several hundred feet long. Tied to these docks, we see great red or black steel steamships. From one end of the ship to the other there

are covers every few feet. These covers are taken off, and spouts are let down from the bins into the holes. The ore runs down these spouts with a great roar, and in two or three hours the ship is filled with ten thousand or more tons. The covers are put on again, and our ship is ready to steam out of the harbor, carrying the ore to the steel mills.



© Keystone View Co.

Fig. 219. Cars of ore on top of the trestle



Ewing Galloway

Fig. 220. Over 130 years ago, when the Great Lakes region was a wilderness, fur traders dug a little canal on the Canadian side of the St. Marys River for their heavily loaded canoes and boats. Today there are five canals, and thousands of boats pass through them every year.

SHIPS ON THE GREAT LAKES

Lumber, ore, and wheat. While waiting for our ship to be loaded with ore, we look around and see many other ships just like ours lying at anchor at other docks. Most of them are being loaded with ore; but streams of golden wheat are pouring into some of them from the tall elevators, or storehouses, near by. The wheat comes from the fields of Minnesota, the Dakotas, and Montana. Other vessels are being piled high with lumber that was sawed in the northern forests.

Copper from Michigan. Now the ships are all loaded, they hoist anchor, and our fleet steams out of the harbor. At Calumet, Michigan, we are joined by ships loaded with copper, for here in northern Michigan are rich copper mines. It is said that the Indians used copper from this region long before the white men came. Joliet had heard of this copper, and was hunting for it at about the time he joined Father Marquette on their trip down the Mississippi. How different the fur fleet that started from Mackinac each spring in Father Marquette's time! It takes us a day and a night, and a part of the next day, to go the length of Lake Superior.

The "Soo" Canal. Then we came to Sault Sainte Marie, on St. Marys River, that short little river which connects Lake Superior with Lake Huron. We do not have to shoot the rapids as the Indians did; we have the Sault Sainte Marie Canal, "Soo" for short, to carry the ships around the rapids. There are really five canals in all, four on the American side and one on the Canadian. Our boats are lowered through the locks, and we pass on through the canal into Lake Huron. Several million tons of freight go through the Soo Canal each year, and it is very important to commerce in both Canada and the United States.

Detroit. As we come to Lake Huron, a few of our boats leave us. They turn south into Lake Michigan, bound for Milwaukee and Chicago, and for Gary, the city built purposely for iron manufacturing. But while some of our ships leave us here, others join us—some from Chicago, loaded with grain. Together, we steam on down Lake Huron.

Soon we pass through the St. Clair River and Lake St. Clair, and finally reach the city of Detroit, on the Detroit River. Here some of our iron-ore, copper, lumber, and grain ships stop, and these different materials are



By Ewing Galloway, N. Y.

Fig. 221. Cleveland, with its steel mills, depends upon these great steamers for its supply of iron ore.

unloaded for the many factories in and near Detroit. Perhaps we shall get some of the iron in the next automobile we buy; and our next loaf of bread may have been baked from flour ground in the flour mills at Detroit.

The ore ports. As we cross Lake Erie, nearly all of the ore ships leave us at Toledo, Cleveland, Conneaut, and Erie. A few of them go as far as Buffalo. In the harbors of these towns we see the ore being unloaded by great cranes that lower big buckets into the holds of the ships and scoop up ten tons at a time. Thousands of carloads of this ore go to the Pittsburgh steel district about which you have already studied.

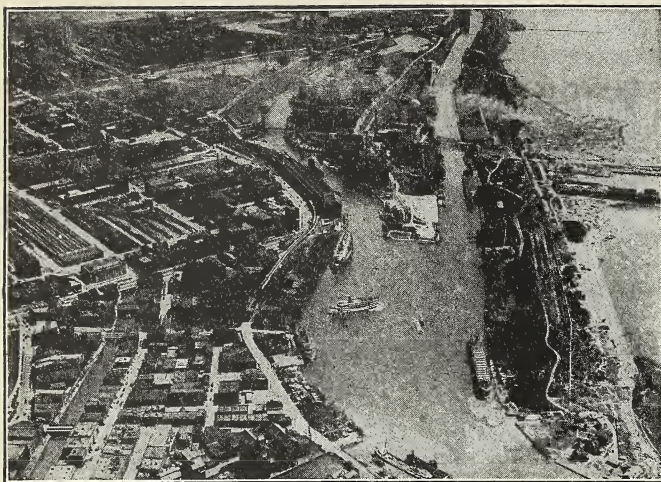
Buffalo. Most of the grain and lumber ships in our fleet go to Buffalo. Here the wheat is unloaded by great "conveyors," as they are called (Fig. 222). These are long belts with buckets fastened to them. As the belt goes around, the buckets scoop up the grain, carry it to the top of the elevator, and empty it into large bins. Much of this wheat is ground into flour in the mills at Buffalo, but some of it is shipped through the Erie Canal and over the different railroads to New York City. From there it is shipped to other countries. The lumber has been unloaded at different ports along the way, but the largest share is unloaded at Buffalo.

The St. Lawrence waterway. The Welland Canal takes boats around Niagara Falls and into Lake Ontario. Then they go down the St. Lawrence and through another canal around the Lachine Rapids to Montreal. Some lake boats cross the ocean, but sometimes their cargo is transferred to an ocean steamship. The whole route from Lake Superior to the Gulf of St. Lawrence is known as the St. Lawrence waterway. Part of it forms a portion of the boundary between the United States and Canada. These countries are trying to work together to improve the waterway.

HOW THE LAKES HELP FRUIT-GROWING

Large bodies of water, such as the Great Lakes, get warm very slowly during the summer. Even after many days of hot early summer weather, the water is still too cool for bathing. Because of this the lake shores are cool during the hot summer months, and thousands of people go there for comfort. Toward the end of the summer the water becomes warm, and stays warm during the cool fall days. So when frosty nights come in September, the regions along the lake shores are kept warm and free from frost until later in the fall.

In the spring the cool air from the lakes keeps the buds of the trees from opening too



Courtesy Buffalo Chamber of Commerce

Fig. 222. The harbor at Buffalo, the greatest port on the Lakes

early. So the orchards near the shores are not caught by late frosts. You can see why orchards farther back from the waters are often damaged by frost, while those nearer the water are not hurt. Because of this influence of the waters of Lake Michigan, western Michigan produces large crops of peaches, grapes, apples, cherries, pears, and garden truck. The millions of people living in the towns and cities around the Lakes make a good market for the Michigan fruit.

QUESTIONS TO ANSWER

1. How does the cold weather help the men in the logging camps? 2. Locate the pine forest region on the forest map. For what does Grand Rapids use some of this lumber?

3. Locate the Mesabi range on the map (page 133); also show where it is on the big map (pages 16-17). 4. How does it happen that the ore from the Lake Superior region can be mined and taken to the furnaces so cheaply? 5. Locate the different cities from which the lake steamers start and where they stop. 6. How do the ships get around the falls and rapids that caused the fur trappers so much trouble? 7. Now think hard. Why is Buffalo located at just the place to make it a great shipping city? Page 82 will help you. 8. How do the Great Lakes help fruit-growing?

THINGS TO DO

1. On an outline map of the Great Lakes region, show the pine forests, iron, and copper. 2. On your map also show the principal lake ports.

3. Trace the route of the fur traders from Mackinac down the Ottawa River to Montreal. 4. Show Quebec, Montreal, Fort Frontenac (now Kingston), Niagara, Detroit, Mackinac, the Soo Canal, Duluth, and Chicago. Show by little arrows the direction the water flows in the lakes.

5. Suppose that each canoe the Indians used to carry furs from Mackinac could carry 500 pounds; how many such canoes would it take to carry the 10,000 tons of

iron ore of a lake steamer? 6. Learn that part of Hiawatha about the making of the canoe. Make a picture of a lake steamer and beside it an Indian canoe.

Books to read: Bailey, *Boys and Girls of Discovery Days*, pp. 132-146; Beard and Bagley, *First Book In American History*, pp. 83-102; Crowe, *Studies in American History, Book I*, pp. 135-207; Eekinrode, *Told In Story, Book I*, pp. 128-140; Faris, *Real Stories of the Geography Makers*, pp. 230-242; Nida, *Following Columbus*, pp. 92-98.



Fig. 223. Apple-blossom time in Michigan. Each year at Benton Harbor an apple festival is held to celebrate Michigan's fine apples.

HOW THIS COUNTRY BECAME THE UNITED STATES OF AMERICA

THE FRENCH LOSE THEIR LAND IN AMERICA

You have learned that three different nations, Spain, France, and England, at one time claimed most of what is now the United States. Each of these nations granted her own people all of the lands in North America. After the English defeated the Spanish Armada in 1588, the Spanish gave little trouble north of Florida. From that time on there was no danger that America would become Spanish.

The Ohio Country and the French. The French had explored and claimed all the country from the mouth of the St. Lawrence to the mouth of the Mississippi. They had built forts on the St. Lawrence and along the shores of the Great Lakes. Where were some of these forts? Now they planned to build a line of them from Niagara Falls south to the Ohio River, and along that river and the Mississippi. By 1750 the French had forts all the way from the Gulf of St. Lawrence to the Gulf of Mexico, sixty in all. But the colony of Virginia claimed the country between the Ohio River and the Great Lakes and named it the Ohio Country.

Washington volunteers as a messenger. The French and the English were old enemies, and each was trying to keep the other from getting possession of any more land in

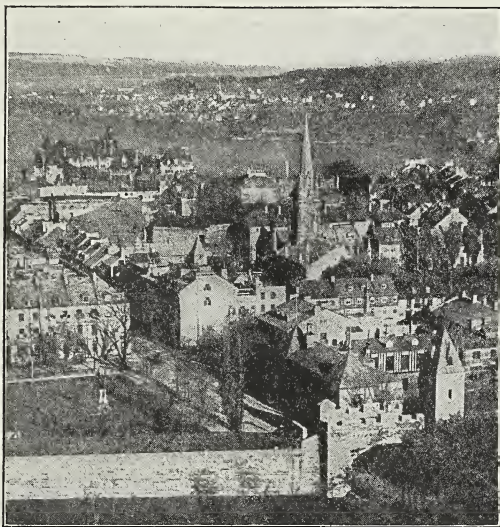
America. The English were determined to drive the French out of the Ohio Country, and Governor Dinwiddie of Virginia decided to warn the French commander, who was at a fort in what is now northwestern Pennsylvania, that they must move. To carry out this task a messenger was needed to make the long and dangerous journey from Williams-

burg to the Ohio Country. One man was sent out, but he returned and said that the journey could not be made.

Then that daring young Virginian, George Washington, promptly offered to deliver the important message to the French commander. He was not afraid, and he knew how to find his way through the forests and over the mountains. When he was the same age as high-school boys are today, he had explored and mapped land in the wildest part of Vir-

ginia. He was always faithful to his duty, and he knew how to take care of himself in hardships and in dangers.

It was late in October and winter was coming on; there was no time to waste. So Washington and a few others, including the scout, Christopher Gist, as guide, started. They went from Williamsburg up Chesapeake Bay and the Potomac to Mt. Vernon, across the Piedmont and the Blue Ridge Mountains to



© Keystone View Co.

Fig. 224. Quebec was the start of the long line of French forts. For 150 years it was the important French city of the New World. Today it seems more like a city of France than of America.

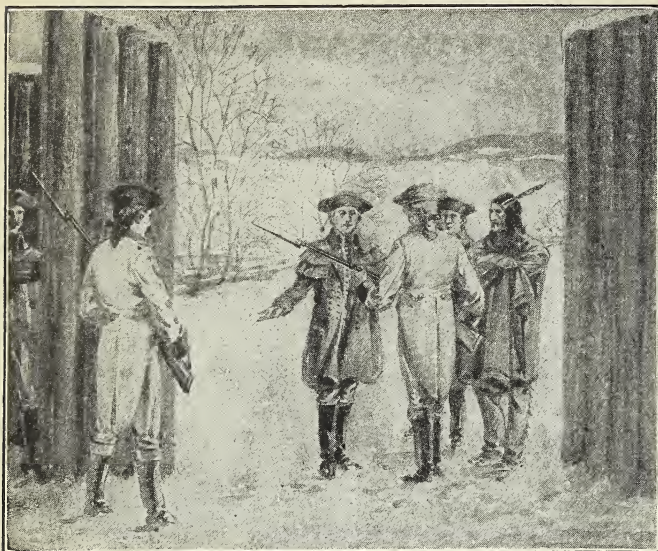


Fig. 225. Washington arrives at the French fort.

Winchester in the beautiful Shenandoah Valley. Then they went over the Allegheny Mountains to a branch of the Monongahela River and on down to where this river and the Allegheny unite and form the Ohio. At this place Washington got Half-King, an Indian chief, to take them the rest of the way up the Allegheny to the French fort a little south of where Erie, Pennsylvania, now stands.

Washington delivers the message. It was on a cold December day that Washington handed Governor Dinwiddie's letter to the French commander. Like all Frenchmen, he was very polite, and he entertained Washington's party for several days while he was writing his answer. In this letter he told the governor that he had been sent to hold the fort, and that he had no intention of leaving it. He said, too, that he would arrest any Englishmen found trading with the Indians in the Ohio Country.

The return. As soon as Washington had received the French commander's answer, he set out for home with Gist, his guide, as his only companion. They had plenty of adventure on the way. They started across the

Allegheny River on a raft, and while Washington was trying to steer it through the ice, he was thrown into the river. They had to sleep on an island that cold night, and Gist's feet were frozen. In the morning the river was frozen over; so they easily crossed to the other shore and continued on their journey.

Washington and Gist had been gone seventy-eight days when they finally reached Williamsburg and placed the French commander's letter in Governor Dinwiddie's hands. The story of Washington's journey made him famous. One day as he stepped into the

gallery of the Virginia Assembly, where the laws were made, every member arose and applauded him. He tried to thank them for the honor, but he could not say a word. Washington was never boastful of anything he did.

Beginning of the French and Indian War. Of course the French commander's answer to Governor Dinwiddie meant war. The governor quickly got ready a small army and put Washington in command. He told him to take possession of the country and to build a fort at the head of the Ohio River, where Pittsburgh now stands. However, the French had already built a fort there, and after a little fighting Washington had to give up and return to Virginia. But he had been present at the beginning of the French and Indian War. The war was so called because the Indians in Canada helped the French, while the Iroquois in New York helped the English. You remember that Champlain had fought with the Canadian Indians against the Iroquois. That made the Iroquois the enemies of the French forever, and now they were to help the English drive the French out of the country.

Braddock's defeat. The next year England sent General Braddock with a force of British regulars to take the fort from the French. Now Braddock was a proud and brave old soldier, used to fighting regular battles with large armies and in the open. When Washington tried to tell him how fighting was done in the woods in America, he thought the young American officer did not know what he was talking about.

Braddock spent so much time building a road over the mountains for his army, that the French learned he was coming and made plans to attack him on the way. One day the British marched into a beautiful valley filled with high trees, and with underbrush along the road as high as a man's head. Everything was still. Not a leaf moved; not even a bird chirped. Then every bush and tree seemed to crash and spit fire, and the British were falling on every side.

Those well trained troops leveled their guns ready to fire, but not a foe was to be seen. They fired volley after volley into the bushes. For three hours these brave men were targets for the enemy. The English soldiers themselves wanted to run to get behind trees. But General Braddock kept them in line until he fell, so badly wounded that he died a few days later.

Washington and his Virginia troops dodged among the trees and held the enemy back until the British soldiers could get away. Washington seemed to be everywhere. Two horses were shot from under him, and four bullets passed through his coat. By the time the battle was over, the Virginians had proved themselves better soldiers for fighting the Indians than the English regulars. The next fall the French fort was captured by the English. The French had called it Fort Du Quesne. The English named it Pittsburgh, for Lord Pitt of England.

The French lose their land in America. The French and Indian War went on for seven years. The English took all the forts



Visual Education Service

Fig. 226. Washington was with the English when they captured Fort Du Quesne.

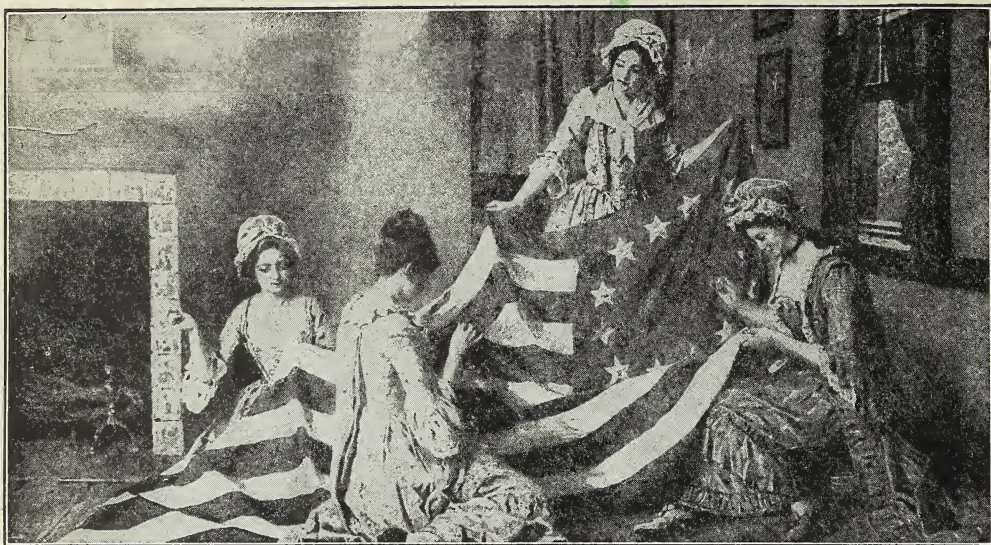
except Quebec and Montreal. Finally, these two cities were captured, and all of New France was lost to the French. Except for Florida and New Orleans, England now owned all of North America as far west as the Mississippi River. Thus you have seen how a great part of North America became an English-speaking country.

QUESTIONS TO ANSWER

1. Where did the French and the English first have trouble? What did the French do to keep out the English? What Frenchman had really explored that valley? 2. Who was sent to tell the French they must leave? Why did it take him so long to make the trip? 3. Why was General Braddock so badly beaten? How did the English finally get Pittsburgh? 4. Can you tell why the capture of Quebec made the French give up? How much of North America did England win?

THINGS TO DO

On an outline map of the United States color in yellow Florida, a narrow strip along the Gulf to New Orleans, and all the country west of the Mississippi. Label it Spanish. Color the rest of the country in red. Label it English. Show Washington's journey. By a heavy black line show the French forts from Quebec to New Orleans.



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Fig. 227. When the colonists separated from England, they needed a flag for the new nation. Washington planned the flag, and Betsy Ross of Philadelphia made the first Stars and Stripes—thirteen stripes and thirteen stars for the first thirteen states. How is our flag today different from this first one?

THE COLONIES REBEL AGAINST ENGLAND

BEGINNING OF TROUBLE WITH ENGLAND

As you know, most of the first settlers came to this country because they were not treated right at home. The Puritans, the Quakers, the Catholics, and the debtors from the prisons of England—all these people and others came to the new land so as to have a better chance and live in peace and freedom. At that time England was glad to get rid of them. But when the colonies became prosperous, she wanted to have all their trade and make them do as she said. In the early days of New England, England had wanted the colonists to do all their trading with her, and she expected the same thing of the other colonies. No machine, nor even the plan of one, could be brought to the colonies. England even passed a law forbidding any manufacturing in America; she wanted to get the raw materials from America and sell the manufactured articles back to the colonists. But the Americans could not make any money that way; they could not even make a living.

Up to the time of the French and Indian War these laws had not been obeyed very well. In fact, England had not tried very hard to enforce them, because she was having wars and other troubles at home. But now, in 1764, she said they must be obeyed, because the colonies should help pay the cost of the French and Indian War. The colonies would have been willing to pay their share of the war cost if they themselves could have voted to do so; but England would not let them do that. She said they were only colonists and should have nothing to say about such things as the taxes they should pay for the support of the government at home.

When England tried to enforce the law that made the colonists pay a tax on all goods brought into America, they began to smuggle goods; that is, they landed the goods away from the docks, where the officers could not see them, and hid them in their houses until they could be sold. So the English officers began searching the homes of people who

they thought had smuggled goods. Some of these officers were rough and insulting, and the people became very angry. In Boston a few who resisted the officers were arrested and put into jail.

The stamp tax. Then, in 1765 England tried to get money from the colonists by forcing them to put stamps, sold by the British government, on all papers, newspapers, contracts, licenses, etc. This was called a stamp tax. The colonists thought this would have been fair enough if they themselves could have voted to pay the tax. But, as it was, they refused to buy the stamps and became angrier than ever. They said that was "taxation without representation," because no colonists were allowed to be members of the English Parliament, where the laws were made and the taxes voted. They mobbed some of the stamp sellers and burned the stamps.

The tea tax. When England saw that she could do nothing with the stamp tax, she gave it up. But she soon tried putting a tax on all the tea that came into the country. She did not think the colonists would refuse to pay that tax, because it was small. Besides, tea could really be bought for less in America than in England. But the colonists said that no matter how small the tax, they would not pay it unless they themselves voted to do so.

Samuel Adams. Samuel Adams was an able man who was living in Boston at that time. He was one of the first to believe that the colonies must separate from England, and he wrote articles that were published in the newspapers of the day. In these articles he urged the people to stand for their liberties, and many of his articles were written against this new tax on tea. These letters worried the governor of Massachusetts so

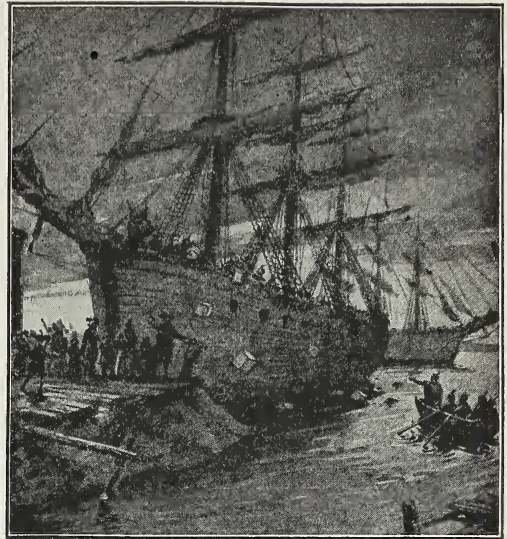
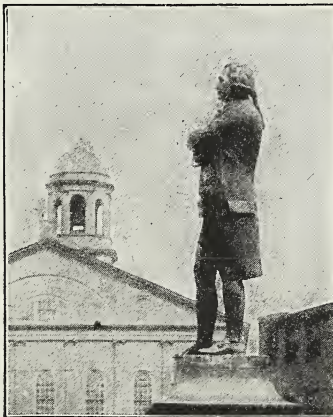


Fig. 228. The Boston Tea Party

much that he called Adams in and told him that he must stop writing such things. But this did not worry Adams at all; he kept right on. As people saw him writing by candlelight they said, "Samuel Adams is hard at work writing against the Tories." The Tories were the people in America who were on the king's side. Adams has been called "the Brains of the Revolution."



© Keystone View Co.

Fig. 229. Statue of Samuel Adams, at Boston

The Boston Tea Party. One day three shiploads of tea came into Boston harbor. The people tried to get the captain to agree not to unload the tea, but he unloaded some anyway. Then one night a party of men dressed like Indians went on board the ships and dumped all of the tea into the water. This is known as the Boston Tea Party. At Annapolis a ship loaded with tea was burned, and ships at New York and Philadelphia had to return to England without unloading.



Fig. 230. Washington and Henry on their way to the Continental Congress

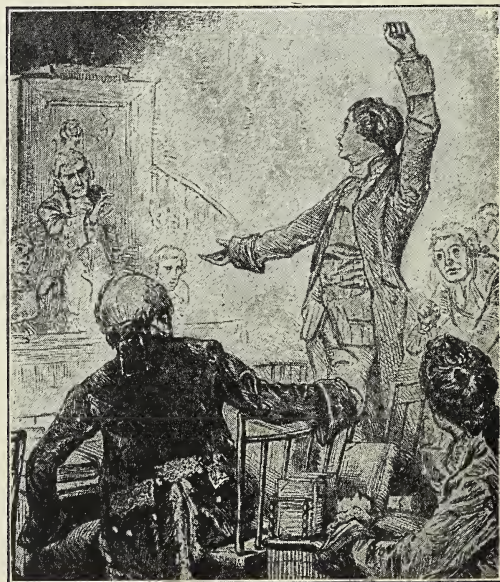
The Continental Congress. The leaders in the colonies saw that the troubles with the Mother Country were becoming worse and worse, and they felt that the colonies should work together to protect themselves. A meeting of leaders from all the colonies except Georgia was held at Carpenter's Hall, Philadelphia, in 1774. The meeting was given the name of "Continental Congress." Washington, Lee, Henry, Dickinson, John Adams, Samuel Adams, Hancock, Sherman, and Carroll were some of the men who met there. Today we honor these men as the founders of our country.

This meeting, or congress, drew up a petition to the king, telling him how all the colonies felt about the tax laws, and asking that they be changed. They also agreed, among themselves, that they would buy no more goods from England if the king did not do away with these laws. In the cities, towns, and counties of the colonies committees were formed to lead the struggle against England and to write to the others. In this way each colony would know what was going on in every other colony. You see, in those days there were no newspapers, telegraph lines, telephones, and railroads such as we have today. This congress also planned to organize companies of "minute-men" in every place. These companies were made up of farmers

and business men ready to shoulder their guns any minute they were called and to fight if necessary; so they were called minute-men.

Patrick Henry's famous speech. Soon after Patrick Henry returned to Virginia from the Continental Congress, word came that British soldiers had fired on a crowd of people in Boston and killed some of them. A great patriotic meeting was held in Richmond at which Henry made a speech that roused the people like a trumpet call. Here is a part of his speech:

We must fight! I repeat it, Sir, we must fight! They tell us, Sir, that we are weak. But when shall we be stronger? Will it be next week or next year? Sir, we are not weak, if we make proper use of the means which the God of Nature hath placed in our power. There is no retreat but in submission and slavery. Our chains are forged! Their clanking may be heard on the plains of Boston! The war is inevitable, and let it come! I repeat it, Sir, let it come! The next gale that sweeps the North will bring to our ears the clash of arms. Our brothers are already in the field! Why stand we here idle? Is life so dear,



© Underwood and Underwood
Fig. 231. Patrick Henry delivering one of his famous speeches against England. Some of his listeners must have been shocked at what he said.

or peace so sweet, as to be purchased at the price of chains and slavery? I know not what course others may take; but as for me, give me liberty or give me death.

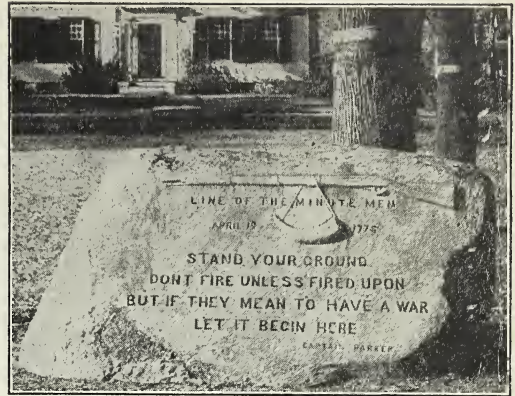
No one who heard the speech could ever forget it, and it made Henry one of the most famous men in his state.

THE WAR FOR INDEPENDENCE

The first battle of the War for Independence. The minute-men from around Boston had gathered and stored powder and bullets at Lexington and Concord. In some way the British learned about this and planned to go to these places and seize the ammunition. They had also learned that Samuel Adams and John Hancock were hiding there. You see, when King George learned of the Continental Congress, he was very angry and ordered the members of the Congress arrested and sent to England. So the British decided to do two things at once: get the ammunition and capture Adams and Hancock.

Paul Revere's ride. The Americans knew the British officers' plans and were ready to warn the minute-men of any move the British might make. Paul Revere, a silversmith living in Boston, offered to take word to the minute-men as soon as the soldiers started. He agreed to wait in Charlestown, across the bay from Boston, ready with his horse. A friend was to hang a lantern in the tower of Old North Church when the soldiers started.

Can you imagine Paul Revere as he stands



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Fig. 232. At Lexington today you may see this rock marking the line of the minute-men.

beside his horse in the darkness and waits for the signal? He can just see the steeple of the church as it towers above the houses. He waits and watches, while his horse paws the ground and champs the bit in eagerness to go. A frog croaks and a fish splashes in the water, but men are asleep. Revere does not take his eyes from the steeple, and now there is a flash of light. He leaps into the saddle, and the horse bounds away as though he knows the message. A farmhouse, a rap at the door, and the call: "The regulars are coming!"—and on he rides through the night.

He gallops into Lexington, and again the call: "The regulars are coming!" The minute-men guarding the house where Hancock and Adams are sleeping tell Revere not to make so much noise. "You will soon have noise enough. The regulars are coming!" he shouts back.

Lexington. Paul Revere has aroused the whole countryside. When the British reach Lexington, about sixty minute-men in their farmer clothes are facing them. Captain Parker speaks to his men: "Stand your ground. Don't fire unless fired upon. But if they mean to have war, let it begin here." It was a bold speech, for they faced several hundred of England's trained soldiers. The Amer-



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Fig. 233. Lexington. The War for Independence begins.



From the painting by Alonzo Chappel

Fig. 234. The retreat of the British soldiers from Concord

icans stood their ground until seven of their number were killed and nine wounded.

The English had defeated this first little handful of men, but soon the English commander saw that the Americans were swarming from all directions. He sent a message to Boston asking for more soldiers to come and help him. He rushed on to Concord and destroyed the little ammunition the minute-men had not been able to take away or to hide. Then the British started back to Boston. But minute-men had gathered from far and near. They seemed to come from everywhere. All that warm spring day they fired upon the British from every rock and fence and every tree and house. The Americans' fire was so hot that 300 British soldiers were killed that day. The war for freedom had begun.

The news of that battle stirred the whole country. Soon men began to come from all the colonies, thousands of them, from even as far south as Georgia. All were determined to drive the king's soldiers from America. Israel Putnam was plowing in the field when he heard the news.

He left the plow standing in the furrow, unhitched the horse, jumped on its back, and rode away to Boston to join the army.

Delegates to the Second Continental Congress were now elected in all the colonies. This Congress met at Philadelphia, May 10, 1775. Among the members were Thomas Jefferson, who was proving himself a leader, and wise Benjamin Franklin. John Hancock was made President of this Congress.

The battle of Bunker Hill. The battle which had begun at Concord and Lexington had ended with the British pretty well shut up in Boston. One day they awoke to find that the Americans had gathered their army on the heights of Charlestown, overlooking Boston across the bay. General Gage tried to drive them away with cannon fire. About 3000 British redcoats rowed across the bay from Boston and started up the hill. Behind their hurriedly thrown-up dirt forts, the Americans quietly waited until they could see the whites of the eyes of the British soldiers. Then there



From the painting by F. C. Yohn. Courtesy Continental Insurance Co.

Fig. 235. The Americans "digging in" on Bunker Hill

was a flash of fire from the American guns. In great confusion the British ran back to the foot of the hill. Again they came, and again they fell back before the terrible fire of the American rifles. A third time they came, but this time the Americans did not fire. Their ammunition was gone, and they had to retreat. Although the British had won this battle, it was a great encouragement for the Americans. They had met the British regulars and found they could have defeated them if their ammunition had not run out. This was the first time an American army had met and fought British regulars.

Washington takes command. Just before the battle of Bunker Hill Congress had elected George Washington commander-in-chief of the American army. Two weeks later he was in Boston to take command. No other man was thought able to lead the Americans. Washington was already known as a great soldier, and all believed him to be a noble and honest man. He said that he was not equal to the command of the army, but that for the good of his country he would do his best. He offered to keep an account of



Visual Education Service

Fig. 236. Washington becomes the leader of the American army in the war for freedom.

his expenses and to wait until after the war was over to be paid.

When Washington arrived in Boston, he rode out to Cambridge, and there under an old elm tree took command of the army. It was said by one who saw him that day, that he had a nobler appearance than any king in Europe. No other American was ever more trusted by his soldiers. They were sure that he would always know what to do and that he would share all of their hardships.

The Declaration of Independence. At the beginning of the troubles with the king and Parliament, the people of America had no thought of separating from England. It was their Mother Country, and they had many friends and relatives there. In fact, many people in England sympathized with the Americans. Some of the leaders in England did all they could to help matters, but King George III would not listen to good



By Ewing Galloway, N. Y.

Fig. 237. Drawing up the Declaration of Independence. From left to right are Thomas Jefferson, Roger Sherman, Benjamin Franklin, Robert Livingston, and John Adams.



© Keystone View Co.

Fig. 238. Independence Hall, Philadelphia

advice. He firmly believed that he could force the Americans to do as he wished. So, more and more the Americans began to feel that separation from England was the only way to get their rights.

Finally Richard Henry Lee of Virginia drew up a resolution which he offered to Congress. This resolution said that the colonies were a separate nation and would no longer be ruled by England. The members of the Congress voted to accept this resolution, and a committee was appointed to write out the reasons why the colonies were separating from the mother country (Fig. 237). Thomas Jefferson was chairman of that committee, and it was he who wrote out the reasons for the separation. This was our famous Declaration of Independence.

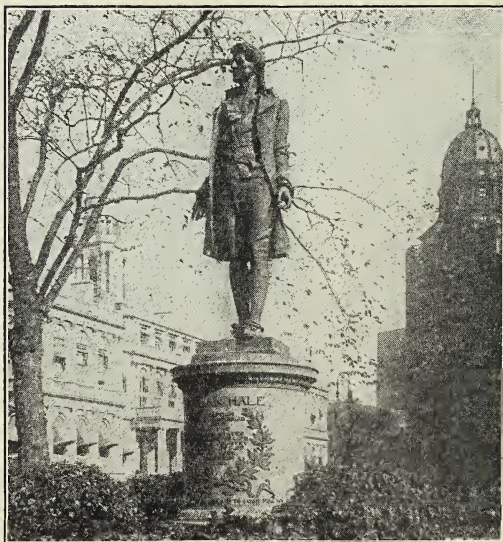
On July 4th, 1776, Congress voted to adopt the Declaration, and it was signed by the different members. John Hancock, president of Congress, signed it in letters as large as he could make. He said that he wanted the king of England to be able to read it

without his glasses. "Now we must all hang together," said one of the members. "Yes, or we shall all hang separately," replied Benjamin Franklin.

The old bell that was rung to spread the news of the Declaration of Independence now rests just inside the door in Independence Hall, Philadelphia, where the Congress met. You have all heard of this famous Liberty Bell. It is a curious fact that when this bell was made, years before that first Fourth of July, these words had been stamped on it: "Proclaim liberty to all the land and to all the people thereof."

British driven out of Boston. In the spring of 1776 Washington drove the British out of Boston. He then hurried away to New York to keep them from capturing that city. A battle was fought on Long Island, and Washington's army was defeated and nearly captured. But Washington was too wise for them; he crossed the East River in a fog at night, marched to the northern end of Manhattan Island, and so escaped.

Nathan Hale. About this time Washington needed to know the plans of the British;



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Fig. 239. Statue of Nathan Hale, New York City



© Underwood and Underwood

Fig. 240. Washington crosses the Delaware in mid-winter to attack the Hessians at Trenton.

so he called for someone to volunteer to go to their camp and get the information for him. Now, anyone who goes into the lines of an enemy to get information is called a spy. If he is caught, he is put to death; that is the law of war. So a spy must be a very brave man. Nathan Hale, a school teacher from Connecticut, volunteered for this dangerous task. By pretending to be a Tory, Hale got safely into the British lines. He had learned their plan and was ready to leave, when he was caught. The next morning as he was led out to his death, he was asked whether he had anything he wished to say. These were the last words of this brave young man: "I regret that I have only one life to give for my country."

The capture of the Hessians. The fall and early winter of 1776 was a discouraging time for the Americans. The British had beaten Washington at New York and had captured part of his army. So he had to retreat across New Jersey and the Delaware River into Pennsylvania. He had only a small army left, and the men were ragged, and often hungry. Winter was fast approach-

ing, and many of them did not even have shoes. All were discouraged, and many deserted and went home; they thought the British were too strong for them. Washington, too, must have many times been in despair, but he never gave up. He saw, however, that he must do something to encourage the soldiers and the people, or America's cause would be lost. Therefore he planned to capture the Hessian soldiers that the British general, Lord Howe, had left in Trenton, New Jersey. The Hessians were German soldiers whom the British had hired to fight for them.

In the evening of Christmas day, 1776, with 2400 of his best soldiers, Washington started across the Delaware River. The river was full of floating ice, and the air was full of snow and sleet. For hours they battled with the ice and the strong current. Sometime after midnight Washington got all his army across, and they started the nine-mile march to Trenton. Many of the men were barefoot and left their bloody tracks in the snow. Some had lost their guns, and their powder was wet; but they kept on. Just at



Courtesy Chicago Historical Society

Fig. 241. The terrible winter at Valley Forge, when everything seemed dark and discouraging. La Fayette is shown here with Washington.

daybreak they came to Trenton. The enemy had been celebrating Christmas and did not think of the Americans crossing the river on such a night. Washington easily captured 1000 men and re-crossed the river before Howe could get there. Soon after this the Americans won another victory at Princeton, and things began to look brighter.

Burgoyne surrenders. In the summer of 1777 the British sent General Burgoyne with an army of regulars to march from Canada to New York by way of Lake Champlain and the Hudson River. The British planned to cut the country in two and keep the people of New England from helping Washington.

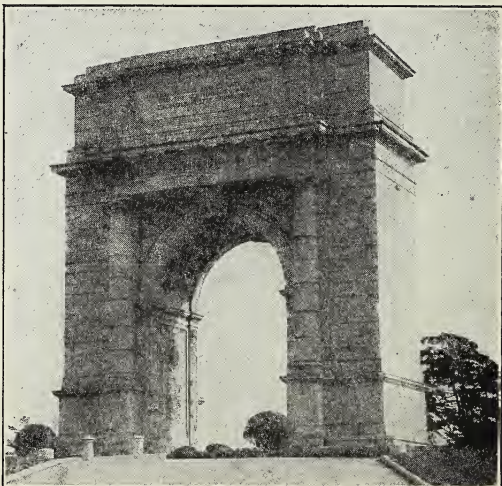
General Phillip Schuyler was in command of the American army that was sent to stop the British. He broke down bridges and cut trees along the way so that he badly hindered their march. In the meantime the Americans in northern New York left their farms and joined the army. General Burgoyne heard that the Americans had ammunition and food stores in Bennington, Vermont. He needed that food; so he sent several hundred men to capture the supplies. But General Stark was there with an army of Green Mountain Boys, as they were called. When the British army

came in sight, Stark said, "There are the British. They are ours tonight or Molly Stark is a widow." The British were badly defeated.

Burgoyne was now in a bad hole. The Americans were all around him, and more were coming every day. He was expecting a British army to come up the Hudson River to help him, but it did not come. It was too late to go back. He had either to fight or surrender. He decided to

fight, and the two armies met in battle at Saratoga. Burgoyne was defeated, and the Americans closed him in tighter than ever. His army was starving. Burgoyne was a brave man, and decided to fight his way out, but the Americans again defeated him, and he had to surrender.

The British capture Philadelphia. That same summer the British general, Howe,



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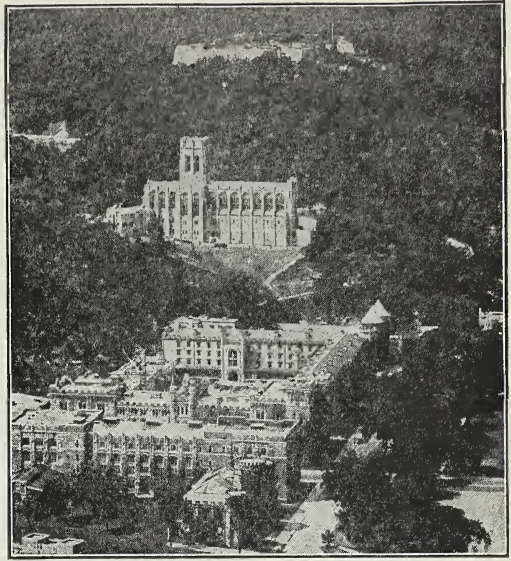
Fig. 242. Memorial Arch at Valley Forge to the brave soldiers of the War for Independence

planned to capture Philadelphia by going around by Chesapeake Bay and marching the short distance overland from the head of Chesapeake Bay to Philadelphia. Washington found this out and marched south to meet him. They met at Brandywine Creek near Wilmington, Delaware, and after a long and hard battle, Washington had to retreat. The British captured Philadelphia and spent the winter there.

Valley Forge. The American army spent the winter at Valley Forge, a few miles from Philadelphia (Fig. 241). They suffered terribly, for they needed clothes and food; but they bore it bravely. Baron Steuben, a German nobleman who had come over to help us, drilled our soldiers all that winter. He worked so faithfully that by spring Washington had a well trained army for the first time since the war had begun. The Americans now moved to Newburgh on the Hudson, and the British moved to New York. For three years each army watched every move the other made along the Hudson River.

Arnold turns traitor. It was about this time that one of the saddest events of the war happened. Benedict Arnold, an American officer, had been the hero of the battle of Saratoga and had been badly wounded leading a charge. After he recovered from the wound, he was given command at Philadelphia. But Arnold thought he should have been promoted more rapidly, and so became dissatisfied and bitter.

He asked for command of the fort at West Point on the Hudson, and it was given him. Here an offer of money and a good position in the British army was made him if he would surrender that fort to the British. So he decided to betray his country. Major Andre, a British officer, came from New York to West Point to talk over the plan with Arnold. On his way back to New York Andre was captured, and the secret was discovered. Arnold learned of Andre's capture and made his escape, but Andre was hanged as a spy.



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Fig. 243. West Point today, where our army officers are trained. In the upper part of the picture you can see the old fort of the days of the War for Independence.

The British gave Arnold \$30,000 and a command in the British army for turning traitor to his country. But when the war ended and he no longer held this position, his money was soon gone. For several years he lived in London in poverty, despised even by the British. It is said that when he was dying, he got up from his bed, put on his American uniform, drew his sword, stood at attention as an American officer, and so died.

Help from France and other countries. Soon after the Declaration of Independence was adopted, Congress sent Benjamin Franklin to Europe to see if he could get France to help the colonies. The Americans knew that France did not like England. If France would only say that we had a right to fight for our independence, it would help us.

Franklin was already known as a writer, and the French liked him very much. He was so witty and wise that they invited him to all their parties, balls, and banquets. The king liked him so well that he allowed him to attend court without wearing the fancy court

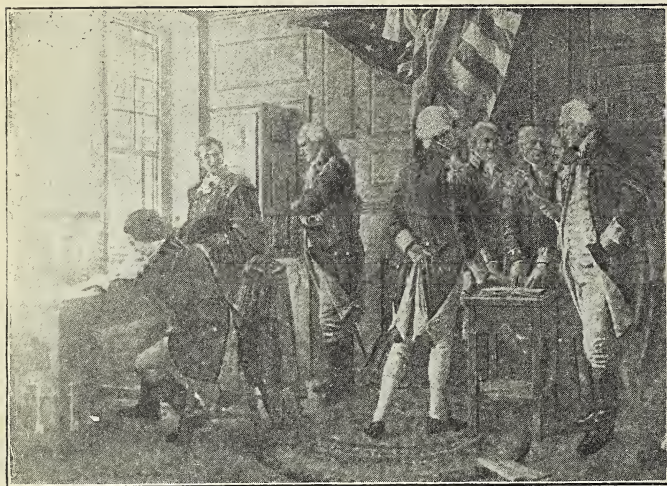


Fig. 244. Baron Steuben and other officers taking the oath of allegiance to the Continental Army during the winter at Valley Forge

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dress. For a year Franklin worked hard to get the king to give us help.

When the news of Burgoyne's surrender reached France, the French were as pleased as Franklin. They said that they would not only treat us as a separate nation, but that they would help us with money, soldiers, and ships. Soon after that England got into trouble with Holland and Spain, and had to use some of her soldiers and ships to fight those nations; so we were helped in that way.

La Fayette. Before the French king agreed to help America, Marquis de La Fayette, a young French nobleman, had made up his mind to aid us in our fight for freedom. He fitted out a ship with men and supplies, and reached America just in time to take part in the battle of Brandywine. Washington and La Fayette became fast friends. In 1779 La Fayette went back to France and got the French to send an army of 6000 men. When he came to visit this country again, long after the war, the school children of America gave money to erect a monument to his memory in Paris.

Besides Steuben and La Fayette there were other noble Europeans who came over to

help the struggling Americans. From Germany came Baron De Kalb, and from Poland came Kosciuszko and Count Pulaski. These men were fine soldiers, and they knew how to train an army, which was just what the Americans needed. Then too, it cheered the Americans greatly to have such men come over from Europe to help them. De Kalb and Pulaski were killed while fighting for us.

John Paul Jones. Over in Scotland about thirty years before our trouble with England began, was born a boy

named John Paul. When he was twelve years old, he went to sea. Later he came to America and lived for some time with his brother on his plantation at Fredericksburg, Virginia. Again he went to sea; but when his brother died, John Paul returned to Virginia to settle his brother's affairs. Then it was that he took the name Jones, probably in honor of a friend named Willie Jones. When his affairs in Virginia were settled, he went to the West Indies Islands and made a fortune in business.

When the Revolutionary War broke out, John Paul Jones offered his services to Congress and was given command of a war vessel named the *Ranger*. He sailed across the sea and around England quite as he pleased, with the English always chasing him. He captured many English trading ships and destroyed them after taking their cargoes. How the English would have liked to capture John Paul Jones! They said he was a pirate, but calling people names does not hurt them.

The *Serapis* and the *Bonhomme Richard*. When the French decided to help us, Jones was given command of a fleet of five vessels that had been built in France. The vessel in which he sailed was named the



From the painting by Chapman. Courtesy City Museum of Art, St. Louis

Fig. 245. The *Bonhomme Richard* capturing the *Serapis*. The *Richard* is the ship in the middle.

Bonhomme Richard. Up the coast of England he went, and off the shores of Scotland the Americans met a fleet of English vessels in charge of two powerful warships. Jones attacked the larger of the two, the *Serapis*. The *Serapis* was a faster sailing vessel than the *Richard*, but Jones ran alongside and lashed the two ships together so that the *Serapis* could not get away from him.

The ships were so close together that holes were shot clear through the *Richard*, and it was set on fire several times. It began to leak so badly that Jones set the English prisoners to work pumping out the water. Nearly all of his guns were broken, and the men were fighting hand to hand from one vessel to the other. An American sailor became frightened and hauled down the American flag; but Jones threatened to shoot him, and he put it up again. Just then the English commander asked Jones whether he had "struck his colors," that is, surrendered. "No," replied Jones, "I have just begun to

fight." Now both ships were on fire. Jones directed a shot at the mainmast of the *Serapis* and cut it down. Then the English commander hauled down his flag and surrendered. The *Richard* was so badly shot to pieces that the Americans went on board the *Serapis*, and soon after, the *Richard* went down.

For his skill and bravery Jones was made Rear Admiral by the United States and was honored by the French. After the war he lived in Russia and France, and died abroad in 1792. His body was later brought to the United States and buried with honors at Annapolis, where our Naval Academy is located. John Paul Jones has been called the Father of the American Navy.

HOW THE SOUTH WAS SAVED AND THE WAR ENDED

Marion, the Swamp Fox. For four years the British had been fighting in the North, but they held only two places, New York and Newport. In 1779 they decided to conquer



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Fig. 246. Statue of General Greene, at
Charleston, South Carolina

the South. An army was sent into the Carolinas and Georgia, and after some fighting they captured Charleston and Savannah. Soon the British held all the important places in the Coastal Plain region of Georgia and South Carolina. The British believed that they could easily take the South. They did not think that the colonists were as determined to be free from England as the northern colonists were. But they were badly mistaken.

The Americans in the South had no regular army, but they formed into small bands of roving fighters and annoyed the British all the time. Francis Marion was the most daring leader of these little bands that so worried the English. He and his patriots made their homes in the swamps of the Coastal Plain, about which you have studied. They would steal out and attack a part of the British army and scurry away again before the British knew where they came from, and they certainly did not know where they went. Thomas Sumter was another such leader. He came to be called the South Carolina Gamecock. Andrew Pickens was another. These small bands bothered the British as flies bother a horse.

Now the British started inland, up into the mountains of northwestern South Carolina. At King's Mountain they were met by a brave band of frontiersmen who defeated

them badly. This cheered the Americans greatly. John Sevier was one of the leaders of the Americans. You will read of him later in the settlement of Tennessee. To help these southern patriots, General Washington sent Big Dan Morgan with an army. He won a battle at Cowpens, South Carolina, but his army was too small to do much. General Gates came, but he was badly beaten and retreated fifty miles before he stopped. Things looked bad for the Americans in the South; and then General Greene came.

General Greene's cunning. Greene's army was not strong enough, nor large enough, to win a battle with the British; so he let them chase him around in the mountains of western North Carolina. This plan of Greene's took the British away from their supplies and pretty well discouraged them. Lord Cornwallis, the English commander, thought Greene could not do much damage; so he marched back to Wilmington, North Carolina, and then north to Yorktown, in Virginia. Greene had tricked Cornwallis. Greene turned back and in three months drove all the British out of Carolina and Georgia, except from the city of Charleston. He did not win any big battles, but by his cunning he won the South for his country.

Cornwallis surrenders. Now if the Americans could only capture Cornwallis, the war might be ended. Cornwallis had his army on the peninsula between the James and the York rivers. If enough forces could reach the spot in time, it looked as though it might be possible to shut him up on this peninsula and force him to surrender. Our friend La Fayette was hurried to Virginia to watch Cornwallis, and several thousand French soldiers were brought from the West Indies to join Washington near New York. French warships sailed into Chesapeake Bay to keep the English from escaping by sea, and Washington marched south as fast as he could. Cornwallis was now shut up on the narrow peninsula, and he had to surrender.



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Fig. 247. Cornwallis surrenders to the Americans, and our freedom from England is won.

When the British soldiers marched by in surrender, their bands played a tune called "The World Turned Upside Down." England must have felt that way when their colonies became an independent nation.

Everybody in Europe and America seemed to know that this victory at Yorktown and the surrender of Cornwallis ended the war. There was general rejoicing. The fast horseman who was sent to Philadelphia with the news reached there in the middle of the night. The town crier went about the city calling, "Three o'clock, and Cornwallis is taken." King George was still obstinate, and for two years would not admit that he was beaten. But in 1783 England made a treaty with us, and agreed that the United States should be free and independent of England. Benjamin Franklin helped to make that treaty.

The land of the new nation. How big was this nation of ours when it began life as the United States of America? How much land and how many people? These were the

limits of the new nation: from the Atlantic Ocean westward to the Mississippi River; from the St. Lawrence River and the Great Lakes southward almost to the Gulf of Mexico. Study the map on the next page. West of the Mississippi for nearly 2000 miles to the Pacific stretched a great region of plains, deserts, and mountains owned by Spain. Spain also owned Florida. North of the Great Lakes England owned the land from the Atlantic to the Pacific, as it does today.

How many people were in our country then? Well, there are more people in either New York or Chicago today than there were in the new nation. And these people were nearly all along the Atlantic coast in New England, eastern New York, and the Piedmont and Coastal Plain regions about which we have studied. The great Appalachian Highland rose up like a wall to keep the people from moving westward. We shall soon learn how the Americans moved over these mountains into the Mississippi Valley.



Fig. 248. The land of our country when it became a nation

QUESTIONS TO ANSWER

1. Why had the colonists come to this country in the first place? 2. Mention some ways in which the English did not treat the colonists right. 3. Do you think the Americans should have helped to pay part of the cost of the French and Indian war? Why? 4. How did Parliament try to tax the colonies? Why did the colonies not pay the tax?

5. Mention three patriot leaders who said or wrote things that we like to remember? Can you repeat anything they said? 6. What was the Boston Tea Party? 7. When and where did the first Congress meet in this country? What did the Congress write to the king?

8. Tell about the first battles of the War for Independence. What did these first battles teach the Americans? 9. Whom did Congress elect to command the army? What experience had he had

as a soldier? 10. Who wrote the Declaration of Independence? Why had the colonists waited so long before they separated from England? 11. Tell the story of Nathan Hale.

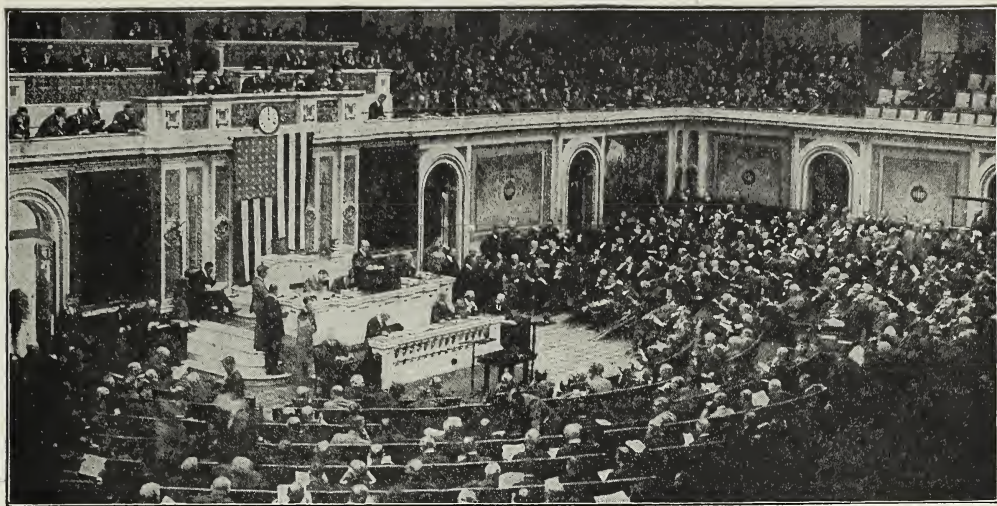
12. Why should Washington work so hard to keep the British out of New York? 13. Why did Washington attack the British at Trenton on Christmas day? 14. What did the British hope to do in sending an army by way of Quebec and Lake Champlain to go to New York? 15. Where did Washington stay for three years after Philadelphia was taken? 16. Explain how the British could have used West Point if they had gotten it.

17. What country finally sent help to us? What leader came from there? 18. What other men came from Europe to help us? In what way did they give help that the American army badly needed? 19. Tell the story of John Paul Jones.

20. How could Marion, Sumter, and Pickens do any good with their few men? Locate the swamps where they lived. 21. How did General Greene fool Cornwallis? 22. Tell how the British were finally defeated. 23. What were the boundaries of our country after the treaty with England?

THINGS TO DO

1. Imagine yourself as Samuel Adams and write a letter to a friend in England telling how the Americans felt toward the king and Parliament. 2. Try to make a play of the Continental Congress that met in Philadelphia in 1775 and drew up the Declaration of Independence. 3. With your finger trace Washington's marches from Boston to New York, Philadelphia, and so on until he camped at Newburg. 4. Turn to a map of the world and locate the place where John Paul Jones had his famous sea fight with the *Serapis*. 5. Trace on the map the route Cornwallis followed from Charleston to Yorktown. Place it on an outline map.



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Fig. 249. The law-makers of our country assembled in Congress at Washington

MAKING THE LAWS FOR THE UNITED STATES

NEED OF WORKING TOGETHER

The colonies work together for liberty. Whenever you boys and girls start a new game, you first make rules so that you know what to do and so that every one has a fair chance. You may not take the trouble to write out your rules, but where a great number of people must work by the same rules, they do write them out. To most of the colonies, the king had given a charter which laid down some big rules and told the colonists how they could make rules or laws for everyday things that might come up. Some of the charters gave the colonies the right to select men to meet as an Assembly, or a Legislature, or a House of Burgesses, to make the laws.

Before the colonies had trouble with the Mother Country, there were thirteen separate colonies. They were not united colonies. There was no United States. You remember that the first time they met to talk over their troubles with England, the meeting was called the Continental Congress. Later the Second Continental Congress met at Philadelphia. It was this Congress that directed

the Revolutionary War. You see, the colonies had to work together to win the war.

The colonies unite to make a nation. When the war was over and liberty was won, the colonies needed as much as ever to work together. They needed first of all to draw up the rules. There was no king to do that. The people had to agree among themselves. Since there were too many people for all to meet at one place, each state elected several of its best men to meet with those from other states and draw up the laws for the new nation. Such men are called delegates.

The delegates from twelve colonies met in Independence Hall, Philadelphia, to make the plans by which the game of the new government should be played. The meeting was called the Constitutional Convention, and George Washington was chosen president of the convention. Others leaders were Benjamin Franklin, James Madison, Alexander Hamilton, and Gouverneur Morris. The plan they made after months of thought and work was called a "constitution." Our country is still governed by this wise plan they made.



Fig. 250. Everywhere Washington was greeted by cheering crowds when he went to New York to be inaugurated as president. He had hoped to live quietly on his beautiful estate, Mt. Vernon, on the Potomac, but our country needed him just as badly to lead the new nation as it had needed him to win independence.

Plan of our national government. This is the plan of government that our forefathers laid down in the Constitution of the United States of America: The head of the government is a President, who is elected for four years. A Vice-President is elected to take the place of the President if he should die. The President sees that the laws are carried out and may suggest new laws if he thinks they are needed.

To make the laws each state elects two men who are known as Senators. When they meet to make the laws, they are known as the United States Senate. Each state also elects as law-makers other men according to the number of people in the state. In the beginning, little Rhode Island was to elect one, big Virginia ten, and so on. These men are called Representatives. When they meet, they are known as the House of Representatives. The Senate and the House together are called the Congress of the United States of America.

As soon as the states agreed to the plan of the Constitution, the thirteen original colonies, by this time called states, became the

United States of America. George Washington was elected the first President (Fig. 250). No one else was even thought of. Washington was truly "First in war, first in peace, and first in the hearts of his countrymen."

Each of our states also has a constitution, a governor instead of a president, and a law-making body, called a legislature instead of a congress. You see, each state has certain business of its own to take care of.

OUR CAPITAL CITY

New York, our first capital.

New York was the first capital of the United States, but within a year Philadelphia was made the capital. It remained so for ten years, and then in 1800 our capital city of Washington was founded. Maryland gave to the United States a piece of land about ten miles square on the banks of the Potomac River. This was named the District of Columbia, and was selected by Washington. This particular spot

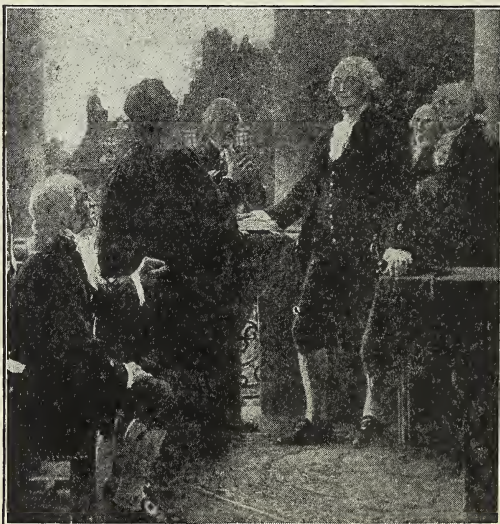


Fig. 251. Washington becomes our first President.



Fairchild Aerial Surveys, Inc.

Fig. 252. Our national capital. At about the center of the picture is the Capitol. In front of this and slightly to the right is a white building, which is the Supreme Court Building. To the left of this building is the Library of Congress. Far back are the Washington Monument and the Potomac River.

was chosen because it was near the center of what was then the United States. It was hardly thought that our country would ever extend beyond the Mississippi River.

The city itself was planned by a French engineer. This engineer said that the United States some day would be a great nation; so he planned the city on a grand scale. In the center of the city was to be the Capitol Building of the Nation (see above). Streets were to run out from this center like spokes in a wheel. The streets were very wide for those days, and some of the most beautiful spots were saved for parks.

The Capitol Building. Suppose we visit our capital, America's most beautiful city, in the early springtime. Millions of cherry blossoms in one of the parks make it a fair-land. The cherry trees were given us by the people of Japan. We must first go to the Capitol Building where our Congress meets and does its work. As we stand under the

great dome in the center, we can look down a long hall to the room where the House of Representatives meets (Fig. 249). At the other end of the hall is the room where the Senate meets. Straight through is the portico where our newly elected presidents stand when they promise to carry out the rules of the Constitution.

We are very proud of our Capitol Building and should like to see it all, but that would take all day. We climb to the top of the dome and enjoy the beautiful view.

The Library of Congress. We see a beautiful building standing near by. It is the Library of Congress, one of the greatest libraries in the world. Millions of books, pamphlets, photographs, maps, charts, and sheets of music are kept in this library. Near it is the beautiful new Supreme Court Building and the office buildings of the Representatives and the Senators.

Down a long, wide street, Pennsylvania



Fig. 253. The White House, home of our Presidents

Avenue, is the White House, where the President lives. On one side of the White House is the Treasury Building, where the United States money is handled. On the other side of the President's house is the building to which come people from other countries to do business with Uncle Sam. The name of the building is State, War, and Navy Building. Near by is the building of the Department of the Interior. We may write to that department and get pictures and stories of our national parks, and other information about our country.

The long wide park in front of us is called the Mall. Some day it will be lined with government buildings on either side. Down there at the end of the Mall is the Washington Monument, built in honor of the Father of Our Country. Straight beyond and by the Potomac River is the beautiful memorial built to honor Abraham Lincoln. On the hills across the river is Arlington, the old home of Robert E. Lee, now a national cemetery for soldiers and sailors of our country.

QUESTIONS TO ANSWER

1. Right after the Revolutionary War were the old colonies, now states, the *United States*? What had to be done to make them united? 2. Where did the Constitutional Convention meet? 3. Try to give the plan of our government. Who was elected our first President?

4. How did the city of Washington happen to be located just there? Who chose the place and who planned the city? 5. Can you see why the capital should not be in any state? 6. Name some of the important government buildings you would see if you went there.

THINGS TO DO

1. Make believe that you are members of the Constitutional Convention, and discuss making the Constitution. 2. Write a letter to a friend and tell him about your trip to the city of Washington. See if you can draw a plan of the city for him so that he will understand what you are telling him.

Books to read: Beard and Bagley, *A First Book in American History*, pp. 103-160; Blaisdell and Ball, *Hero Stories from American History*, pp. 18-155; Davidson, *Founders and Builders of Our Nation*, pp. 46-90; Eckinrode, *Told in Story*, pp. 186-214; Evans, *America First*, pp. 139-208; Hart, *Camps and Firesides of the Revolution*, entire; Hubbard, *Little American History Plays for Little Americans*, pp. 61-92; Logie, *From Columbus to Lincoln*, pp. 122-127; Woodburn and Moran, *The Makers of America*, pp. 88-117.



Fig. 254. The Washington Monument



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Fig. 255. Appalachian mountain ranges in eastern Tennessee. Look at the map on page 164 and see how this great mountain range rose up like a wall between the colonists along the seacoast and the rich Mississippi Valley to the west.

HOW THE AMERICANS MOVED INTO THE MISSISSIPPI VALLEY

THE KENTUCKY-TENNESSEE REGION

FOUR GATEWAYS TO THE WEST

Why the colonists stayed along the coast. You know that the colonies which fought the War for Independence were along the eastern edge of the continent, mostly between the mountains and the sea. It was not until the time of the War for Independence that our great-great-grandfathers, who lived in these Thirteen Original Colonies, began to move west. Up to that time only a few backwoodsmen, a few who were bolder than the others, had gone across the mountains. And most of these had gone to hunt and trap and to trade with the Indians rather than to settle. Let us see why so few had gone west before the war. There was a reason for it; something was in the way.

On the map (page 164) locate the mountains back of the Coastal Plain, and you can understand what happened when the people from the East started to go West. The Blue

Ridge Mountains in Virginia and Carolina were rather easy to cross, for they are low and are cut through by many rivers. Look at the maps (pages 29 and 112) and see how many rivers cut through the Blue Ridge Mountains. Let us see why the Great Valley in this region (see map, page 164) was important in settling the country beyond the mountains. The valley runs southwest from New York to Alabama. Beyond the Great Valley are the high, rough Allegheny and Cumberland mountains, which were difficult to cross. So the early pioneers crossed the Blue Ridge and turned south into the Great Valley. They followed it into North Carolina, and even into Georgia; and here they settled rather than try to cross the mountains to the west. Germans, Scotch, and Quakers from Pennsylvania followed this valley into the Carolinas and Georgia. Traveling over the mountains was not easy.

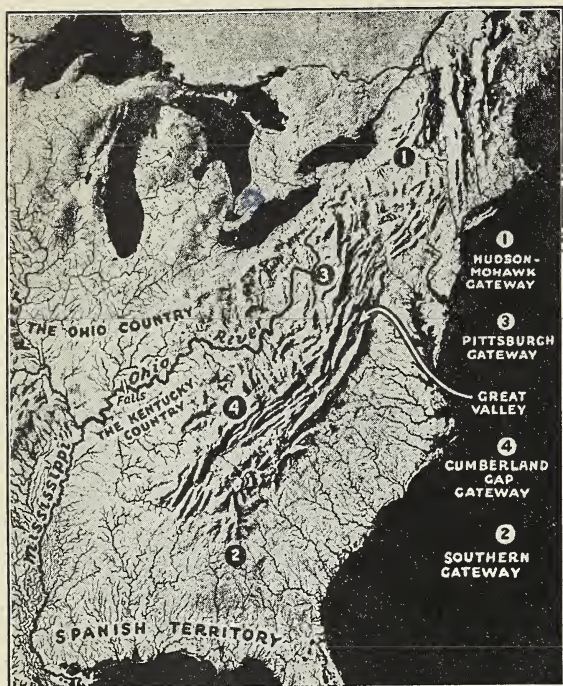


Fig. 256. The four gateways to the West

Now, there were four gateways through which settlers could have traveled, and finally did travel, through the mountains to the West: (1) the Hudson-Mohawk Valley gateway, the easiest of all; (2) the Southern, or Georgia, gateway around the southern end of the mountains, not quite so easy; (3) the Pittsburgh gateway to the Ohio Valley, a very hard way; and (4) the Cumberland Gap gateway, the hardest of them all. Strange as it may seem, the Cumberland Gap gateway was really the one first used.

The Mohawk Trail. The Mohawk Trail, as it was known, was the easiest and best gateway from the East to the West, anywhere from Canada to the Gulf of Mexico. You can see that there are no mountains and hardly any rivers to cross, and it led directly to Lake Erie and the Ohio Country. Yet it was nearly two hundred years after New England and New York were settled before

white settlers traveled over that road to the West. The war-like Iroquois Indians lived in the country along this route, and pretty well filled it. The French had control of the Great Lakes and kept the English out of the country west of New York and Pennsylvania. Then, after the French were driven out, the English government and officers did not encourage settlers to go west. They were afraid the fur trade would be spoiled if the country were settled. After the War for Independence the British agreed to let the United States have the Ohio Country. Yet they did not move out, but stayed there and held the forts along the Great Lakes. So for nearly thirty years the British kept the Americans from traveling through this gateway.

The Georgia gateway. At the southern end of the mountains the country is nearly level for a thousand miles from Georgia westward. But the savage Cherokee Indians in Georgia and Alabama and the Spaniards in Florida kept the English from even settling Georgia until 1732, over 100 years after the Pilgrims landed. Besides, the French were along the Gulf coast from Florida to Louisiana. Very few English settlers moved from Georgia into what is now Alabama and Mississippi until after the Indians were moved to the West and the United States had bought Florida from Spain.

The Ohio River gateway. Since the settlers could not get around either end of the mountains, there was only one thing left for them to do: go through or over the mountains. The Ohio River gateway would have been the next best route. As you can see by the map, many rivers flow from the mountains toward the east. It would not have been hard to travel up those valleys to low passes over the mountains. Once on the other side of the mountains, the settlers could

follow the valleys of the rivers that flow west to Pittsburgh. And from Pittsburgh they could float down the Ohio River and on into the West. But for many years the French held the country to the west, as we know.

The Cumberland Gap gateway. The Cumberland Gap provides a pass through the mountains to the Kentucky and Cumberland River valleys. In spite of the fact that this gateway was the crookedest, the longest, and the hardest of the four,

as the map shows, it was the first used. There were no French or Spanish to block the way here. There were only Indians; but the settlers would not be stopped by Indians. Then too, the settlers in the South soon began to feel the need for more land. Great tobacco plantations took up the land and soon wore out the soil. People began to talk of moving over the mountains to a new and rich land.

This land to the west had been given to Virginia by the king, and the Virginians wanted to see what it was like. The first to explore it were hunters and trappers, of whom the most famous was Daniel Boone. The story of Daniel Boone is really the story of Cumberland Gap and Kentucky.

DANIEL BOONE AND KENTUCKY

Boone's boyhood. All American boys and girls love to read the story of the famous pioneer, Daniel Boone. Daniel was born near Philadelphia. Like all other Quaker boys, he was taught to say "thee" and "thine," instead of "you" and "yours" as we do. There were not many schools in those days. Daniel's brother's wife taught him to



Courtesy Middlesboro Chamber of Commerce

Fig. 257. On the east the Cumberland Mountains rise up almost straight in a rocky wall over 1000 feet high. Through this wall Nature made the Cumberland Gap gateway. For hundreds of years buffalo, deer, and other animals had used it in wandering from one grazing land to another. The Indians found it an easy way through the mountains. Then Daniel Boone led the first settlers through it to the rich lands of Tennessee and Kentucky. Today a fine concrete road runs through the Gap, and a railroad passes under it in a tunnel.

read and write, and a little about arithmetic. Squire Boone also taught his four boys the blacksmith trade. But Daniel's real school was the forest. One day his father bought him a new rifle. He was very happy over his new gun and practiced until he became one of the best marksmen in the country. Daniel grew up with the Indians all around him, and he was with them so much that he learned their ways. At sixteen, there was not a better woodsman in all eastern Pennsylvania than Daniel Boone.

The Boones move to Carolina. In the spring of 1750 Squire Boone decided to move his family to a warmer climate. He chose North Carolina, five hundred miles to the south. After a hard journey of many weeks down the Great Valley, they reached the Yadkin River near where Winston-Salem now stands. There they found the climate good and the soil fertile. Daniel helped to clear the land and build a log house, but he went hunting at every opportunity.

When Daniel was twenty, he married black-eyed Rebecca Bryan, a neighbor girl, and brought her home. Now that he was



Cusick Studio. From a painting in the Kentucky State Capitol

Fig. 258. Boone and his companions get their first view of the beautiful Kentucky country. It was a great Indian hunting ground, even for tribes from the Ohio Country far to the north.

married, he felt that he must make more money from his hunting; so he decided to try the country to the west. On one trip he crossed the mountains into Tennessee and made his way through the wilderness to the Watauga River. Here, later, the first settlement in Tennessee was made. Daniel found plenty of buffalo, bear, beaver, muskrats, panthers, wildcats, and wild turkeys; the hunting was fine. While on this trip, Daniel cut these words on a beech tree: "D. Boone cilled a bar on this tree in 1760." Until a few years ago the old tree was still standing.

In the fall of that year John Findlay, a peddler and old-time friend of the Boone family, came to their home. The Boones asked him to spend the winter with them. Daniel was fascinated by the stories Findlay told of his trip to a beautiful country west of the mountains, which the Indians called Kan-Tuck-Kee. There was a mountain gap, said Findlay, through which one could make his way to this wonderful country, and he offered to show Daniel the way. Daniel made up his mind to go. Soon his plans were completed, and with Findlay as guide he and four other daring young adventurers set out.

Off for the Kentucky country. They followed an Indian trail up the Yadkin River, across the Great Valley, and through the Cumberland Gap. After five weeks of hard travel they came to the head waters of the Kentucky River. Here they made a camp. For safety, the men went hunting in pairs. A man by the name of Stewart was Daniel's partner. One day when they were on top of a hill near their camp, they were suddenly surrounded by Indians. The Indians took their collection of skins and furs and told them to leave the Indians' hunting ground. A few months later, Daniel's brother, Squire, joined the party. All winter the party hunted and trapped. In the spring they went back home with the skins, furs, and dried meats they had collected, but Boone stayed on. He was now the only white man in that part of the country, and for two years he explored what is now the state of Kentucky.

Boone's adventures. A whole book could be written about Boone's adventures with the Indians. One day he was standing on a bluff sixty feet above a river, when he discovered that the Indians had surrounded him. He saw that he must jump or they would get

him. He jumped. Landing in the top of a tree, he slid down the trunk, swam across the river, and escaped. At another time when Daniel was being followed by the Indians, he noticed a long grapevine that had fastened itself to the top of a tall tree. He cut this vine near the ground, swung himself far out to one side of the road, and landed in the underbrush. The Indians saw the grapevine swinging and knew that Daniel had used it to swing himself out of the road, but they did not know to which side of the road he had swung; so they lost the trail.

Some Indians captured Boone once and took him to their village, where Chillicothe, Ohio, now is. Because of his courage and skill, he was adopted into the tribe as the son of the chief, Black Fish. One day Boone heard the Indians planning an attack on a Kentucky settlement. The next day he slipped away and with the Indians chasing him started on the 160-mile journey to warn the people. He reached the fort safely, and the Indians were beaten off.

First settlement in Kentucky. Boone spent two years in Kentucky and then went back home, but he was restless and was homesick for the wilderness. With his own and four other families, he set out to make a settlement, but the party was driven back by the Indians just a few miles from Cumberland Gap. Boone knew that he must do three things before the country could be settled—make a treaty with the Indians, build a road, and build a fort. Two years later the Cherokee chiefs were called together and paid in cloth, ornaments, guns, and money for their claim to that part of Kentucky.

Boone and his men now began building a road through Cumberland Gap to the Kentucky River. They started in southwestern Virginia and worked through the valleys of the Holston and Clinch rivers to Cumberland Gap. This 300-mile road was cut through bushes and forests, and was marked out as far as the falls of the Ohio, where



Fig. 259. Boone's daring leap to safety

Louisville now stands. You would laugh at this if it were called a road today. They did not even try to make it wide enough for a wagon, and tree stumps had to be left just where they were. The best they could do was to make a trail that pack-horses could travel over. Find the Holston and Clinch rivers, Cumberland Gap, the Kentucky River, and Louisville on the map (page 169).

Boone now built a fort on the Kentucky River at a place called Big Lick, where buffalo herds came to lick salt from the rocks. This settlement was named Boonesboro, and to it Boone brought his family. The year before, 1774, he had helped James Harrod build a fort a little farther west. This settlement, Harrod's Town, was the first in Kentucky.

Boone leaves Kentucky forever. As the years went on, the Kentucky country became more and more thickly settled. Daniel Boone had never been a good business man. He



Fig. 260. Boone went ahead to mark the way for the Wilderness Road. How did he show the trail?

knew nothing of law or courts. After what he had done for Kentucky, he felt that he had a right to all the land he wanted. However, since he had no papers to prove what he owned, his enemies took all of his land away from him. In the meantime, Daniel Morgan Boone, his oldest son, had moved to Missouri. So one day Boone said to his wife, "Rebecca, there is not enough elbow room for me here. I have caught all the beaver there are on the river. Let us go to Missouri and live with our son Daniel."

Daniel's Kentucky friends came from far and near to bid him good-by, for many of them owed their lives to him. It was a long journey by pack-horse and flatboat, but Rebecca Boone was used to moving. Boone trapped and hunted in the rivers and woods of Missouri till he was eighty years old. Before his death he became very famous both in this country and in Europe, and he is still known as the

greatest American backwoodsman. He won his way over high mountains and through dense forests; he fought the red men and beat them at their own game. It was he who prepared the way for the millions of people who now dwell in the region west of the Cumberland Mountains.

THE FATHER OF TENNESSEE

James Robertson. It was James Robertson who really explored and started the settlement of the state of Tennessee. Three or four years before Boone started the colony in Kentucky, Robertson and a little band of brave pioneers journeyed over the mountains from North Carolina into the present state of Tennessee. Here near the beginning of the Watauga River they made a small settlement quite high up on the slopes of the mountains. This was the first settlement in Tennessee. To this settlement came also John Sevier, a brave leader and fighter in the struggles with the Indians and the first governor of Tennessee. These brave pioneers were the ones who defeated the British at the battle of King's Mountain in the War for Independence. Later on Robertson crossed the mountains through Cumberland Gap and traveled straight ahead to the Cumberland River.

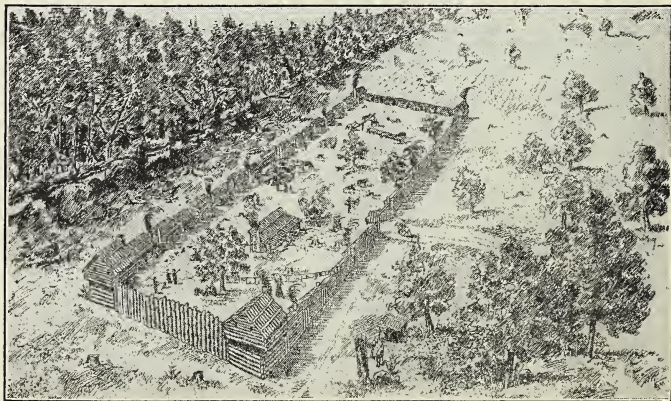


Fig. 261. Forts like these were the beginning of many of the towns and cities of today. The settlers cleared the land, built their cabins, and planted their crops in the country around the fort. When the Indians went on the warpath, they fled to the fort for safety.

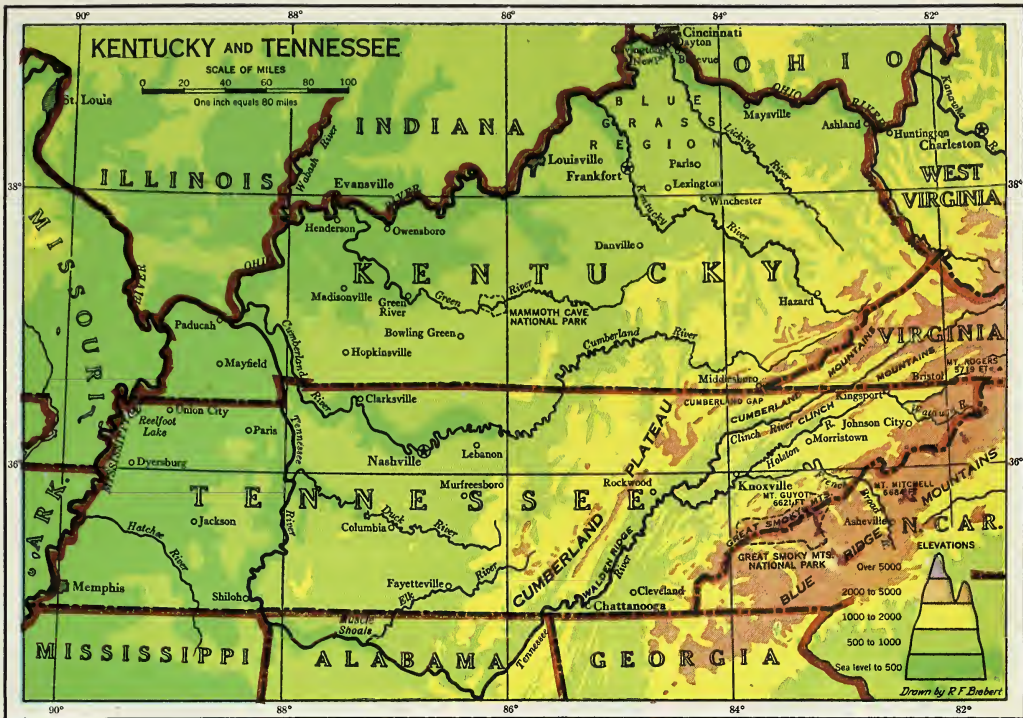


Fig. 262. Map of Kentucky and Tennessee

He found such a rich land and such a beautiful country that he decided to move his family from North Carolina.

When Robertson moved his family, he thought it would be easier for them to travel by water than to walk all the way across the mountains; so he built boats and floated down the Tennessee River to the Ohio. The party then paddled up the Ohio and Cumberland rivers until they came to the level lands of northern Tennessee. Here they made a settlement called Nashborough, which was later changed to Nashville. Other settlers followed them rapidly and settled along the rivers. This section was settled more rapidly than Kentucky, because it was easier to reach.

QUESTIONS TO ANSWER

1. Locate the four gateways and the trails that led through them. Which was the first one used? Can you tell why the Mohawk Trail was easier

than the Georgia gateway? 2. Locate the Great Valley on the wall map. Name two rivers that flow entirely across the Valley; one that flows north; one that flows south. 3. Show the route that Squire Boone and his family used in going south. Why did they move south?

4. Follow on the map the route Boone took into Kentucky. Locate Cumberland Gap on the colored map. What is a mountain gap? 5. Why was it so important to be a good shot in those days? 6. Why did the people in the South want to go across the mountains into Kentucky and Tennessee? 7. Why would there be good hunting near a salt lick? 8. On the wall map show how Robertson took his family to Nashborough.

THINGS TO DO

1. On an outline map of the United States show the Blue Ridge, Great Smoky, Allegheny, and Cumberland mountains, the Great Valley, the Wilderness Road, and the four gateways. Make pictures of Indians at each of the gateways to show that they hindered the people from going west.



Visual Education Service

Fig. 263. The beautiful Tennessee Valley near the city of Chattanooga

THE KENTUCKY-TENNESSEE REGION TODAY

THE VALLEY AND THE PLATEAU

The Great Valley. You remember that the Great Valley extends from the Hudson River southwest across the southeastern part of Pennsylvania, across the little neck of Maryland, and through the western part of Virginia. It also passes through the eastern end of Tennessee and runs down into Alabama. Notice that the Shenandoah River flows northeast, and that the Tennessee and its branches flow southwest from this valley. The Shenandoah Valley, as you have learned, was settled by the Scotch-Irish, Germans, Swedes, and Quakers who came into it from Pennsylvania. Many of these people traveled on south into the western part of the Carolinas. The same people, or their children, followed Boone and Robertson into Kentucky and Tennessee.

That part of the Great Valley that lies in Tennessee is called the Tennessee Valley. Here the soil is very fertile; it is much like that in the Shenandoah Valley. The same crops and the same animals are raised, except

that a little cotton is grown in the southern part of the Tennessee Valley. Corn is the leading crop, and is mostly used for fattening hogs. More and more hay is being raised to feed the increasing numbers of cattle that



U. S. Department of Agriculture

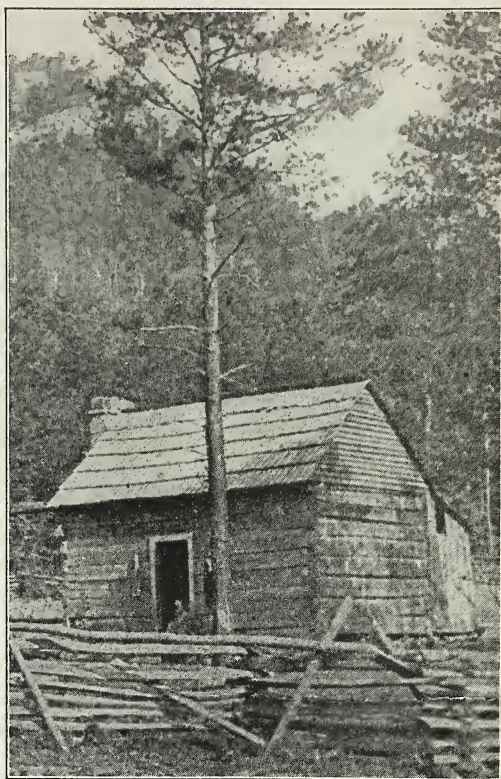
Fig. 264. A peach orchard on the hilly land of the plateau region

pasture on the slopes. Quite a little tobacco is grown in this valley. The ridges and slopes are good for pears, plums, cherries, peaches, and especially for apples.

The people of the plateau region. Across the eastern end of Kentucky and Tennessee stretches the Cumberland plateau, or highland, a mass of hills, mountains, and small valleys. The plateau region is the western slope of the Appalachian Mountains. This rough, high country extends from Pennsylvania through West Virginia, Kentucky, and Tennessee. Study the colors on the maps (pages 16-17 and 169) so that you can see just where these highlands are. In Pennsylvania and West Virginia the highland region is called the Allegheny plateau.

When the early settlers followed Boone and Robertson into the rich Kentucky region, some of them stopped in the mountains of the Cumberland highlands on the west side of the Tennessee Valley. The same thing happened to people from the Shenandoah Valley who went over the mountains into what is now West Virginia. You might say they got stuck in the little valleys and hills. Because it is not easy to travel in the mountains, these people have stayed in the same district ever since, never traveling far from home and seldom seeing anyone but their neighbors. They even call outsiders "foreigners." They live almost as they did a hundred years ago.

The mountain homes are usually two-room cabins built of rough-hewn logs chinked with clay. A lean-to at the back serves for a kitchen. The walls are bare, and there is just enough furniture to get along with. Fireplaces are the only means of heating, just as they were in the old days. One little valley may have two or three farms, and the next little valley two or three. None of the farms are large. The slopes may have a few cleared patches; but most of them, and the ridges, are covered with forests of valuable hardwood trees. Locate this Appalachian forest region on the forest map on page 135.



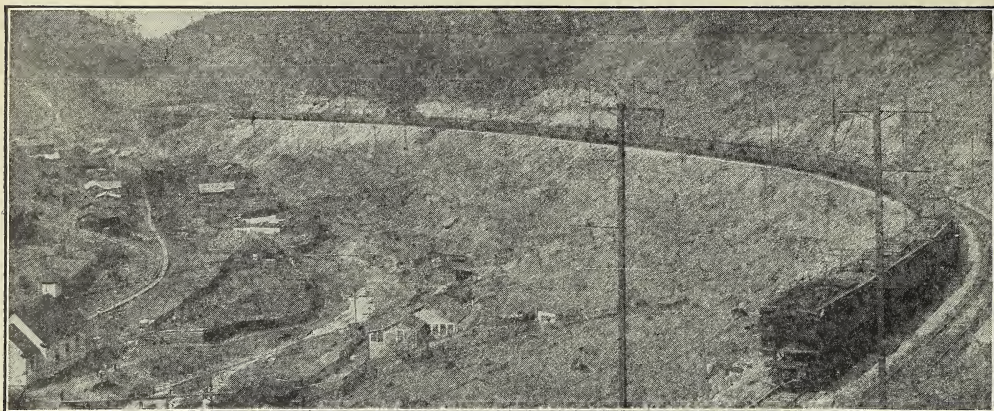
Visual Education Service

Fig. 265. A mountaineer home in the plateau region

In the large valleys and on the edge of the plateau the homes are better, for there is richer land and more of it.

Many of these people and their children cannot read or write, because good schools have been scarce in this region. The homes are so scattered and travel is so difficult through the mountains that it has not been easy to have schools. The building of railroads and highways and the opening up of mines are helping this mountain region.

Crops of the plateau region. Corn is the principal crop, as it produces the most food per acre for both people and animals. Furthermore, it is easily stored. Small crops of rye, oats, wheat, barley, and buckwheat are raised, and each farmer grows enough tobacco for his own use. Hogs, geese, turkeys, and



Courtesy Westinghouse Electric and Manufacturing Co.

Fig. 266. A 6000-ton coal train hauled by an electric locomotive in the Alleghenies of West Virginia

chickens are seen around each house. Some families may have a cow or two, but the milk is poor and thin. There are a few cheese factories. As the roads are improved, it will be easier to take farm products to the cities and towns, and farming will become more profitable. More cows and goats will be pastured on the mountain slopes and the milk sent to the cities or made into cheese. Dairying and fruit raising will help make the mountain region prosperous.

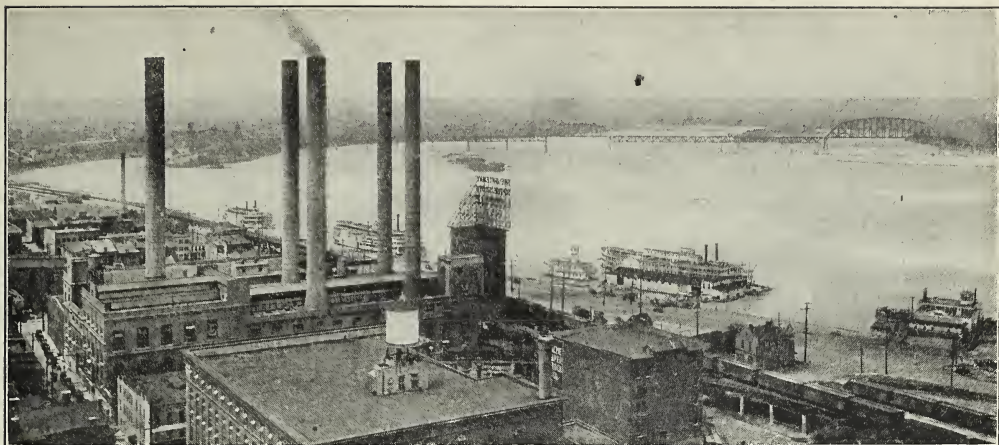
Minerals and lumber. For years people here were interested only in farming. Now there are many factories. Let us see why this is. Part of the Appalachian coal-field is in this section, and there is plenty of water-power in the mountain streams. The Tennessee Valley Authority, by building Norris and other dams, is making it possible to have electric power. The region has marble, zinc, and copper, and there is iron in the Great Smoky Mountains. There are valuable hardwood forests in the region. With plenty of power to run machines, and all kinds of raw materials near at hand, it is no wonder factories are springing up. There are many cotton-mills and recently important rayon-mills have been operating in Kingsport, Elizabethton, and Old Hickory in Tennessee and in other towns of the section. Other industrial

towns are Huntington and Charleston, West Virginia; Jackson and Middlesboro, Kentucky; Knoxville and Chattanooga, Tennessee.

RIVERS AND LOWLANDS

Rivers. The rivers on which the pioneers and settlers rowed into these states have their sources in the mountains of Kentucky, Tennessee, and Virginia. The Tennessee and Cumberland flow southwest and then west and north like great bows into the Ohio. These rivers have always furnished transportation for the products of Kentucky and Tennessee, and the Ohio has been the great highway for Kentucky and West Virginia. Even in this day of railroads thousands upon thousands of tons of coal and steel are floated down the Ohio River.

The Blue Grass country. Between the Cumberland plateau and the Tennessee River where it runs north into the Ohio River, we find a fine, rolling, mixed-farming section very much like that of the Piedmont and the Shenandoah Valley. This whole section is known for the rich grass grown as feed for cattle and horses. The two parts of this section that are noted for rich soil and fine crops are the famous Blue Grass country in Kentucky and the Nashville Basin in central Tennessee. The name "Blue Grass" comes



© Caulfield and Shook

Fig. 267. The Ohio River at Louisville, the largest city in Kentucky. What cities in what state are on the other side of the river? There is a canal at Louisville to take boats around the rapids in the river. Can you see, at the left side of the picture, where the canal begins?

from a grass that has blue blossoms. When cut and dried, it makes a very good kind of hay. No wonder many people from the Atlantic coast settlements left them and poured westward over the mountains into this rich region. A few years after the War for Independence, while there were only a few thousand settlers north of the Ohio, there were about 100,000 people in Kentucky and Tennessee.

The Blue Grass country lies in almost a circle in north central Kentucky. This section has also been called the Heart of Kentucky, and Lexington lies in the center of it.

As you drive through this Blue Grass region, you pass shaded pastures where fine saddle- and race-horses are feeding. Kentucky has long been noted for its fine horses. There are also cattle, sheep, and hogs. Of course, corn, wheat, oats, clover, and alfalfa are raised to feed the stock. Hemp, from which rope is made, is also grown in this section. The heart of the Blue Grass country seems like a great park. Tree-lined roads wind through a gently rolling country, past beautiful homes set back from the highway in big shady yards. Some of the homes are

very beautiful and have wide porches with pillars. Turn to the map on page 169 and find the Blue Grass country.

There are many big springs of cold, pure water bubbling out of the ground in the Blue Grass region. The early settlers were happy indeed to find plenty of pure, cold water, so necessary to them and their cattle. Several settlements which were made near these springs have become prosperous cities and towns.



James Sawders

Fig. 268. A scene in the Kentucky Blue Grass country



Visual Education Service

Fig. 269. Tobacco cut for wilting. Toward the top of the picture you can see the wagon which hauls the tobacco away on racks.

Growing tobacco. Tobacco is the leading crop in the Blue Grass region. The limestone soil seems just right to give it the best quality and flavor. Let us see how tobacco is grown.

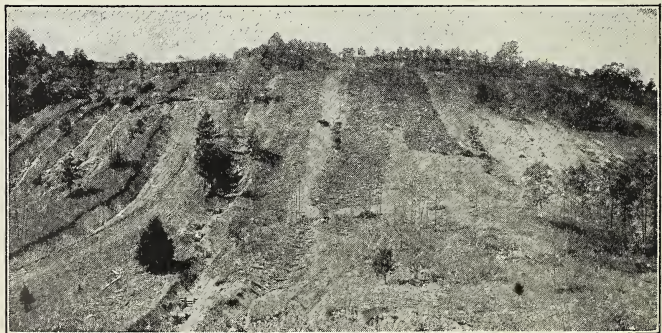
Tobacco seeds are so tiny that they must first be planted in seed beds. The soil in the seed beds is very carefully prepared, and the seeds are planted in March. The soil must be kept moist and warm. Sometimes it is necessary to protect the beds from the cold by stretching thin cloth over them. A bed nine feet by twelve feet will produce enough plants for about one acre of ground.

In May these small plants are transplanted to the field by hand, mostly, but sometimes machines are used. As the young plants grow, they are so tender that they are usually hoed by hand. Weeds must be kept out of the field, and the ground constantly loosened. Along in July the tops of the plants are cut off for the purpose of making the leaves grow larger and thicker

and ripen more evenly. About thirty days later, the tobacco is ready to harvest.

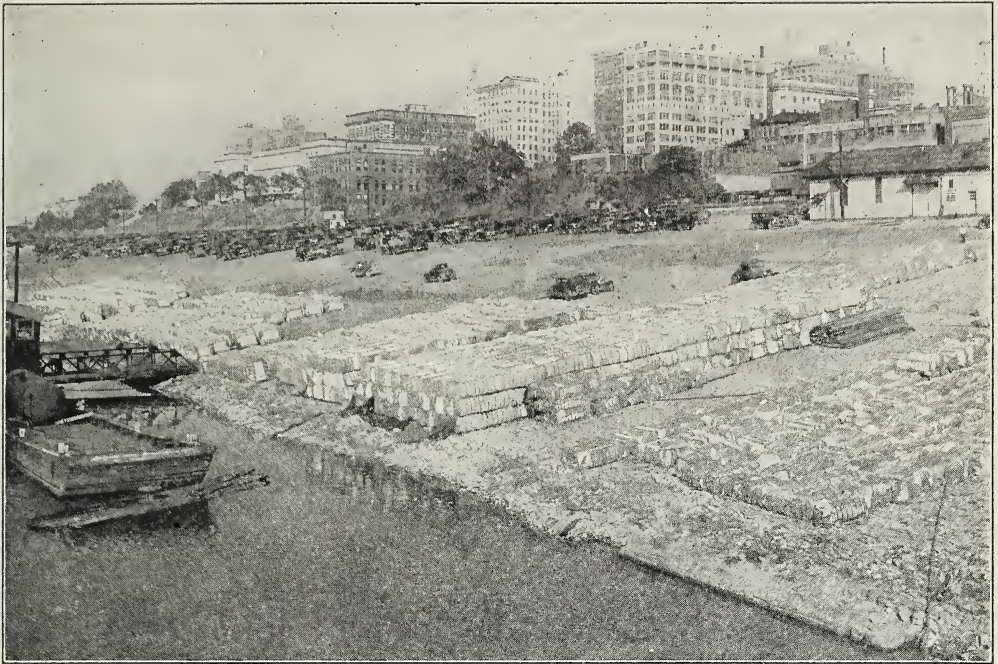
The plants are cut and allowed to wilt a short time before they are taken from the field. The stems are then split and hung on laths or sticks. These are hung on racks at different heights in a big barn until it is filled from the bottom to the top. There are high doors on all sides of the barn so that on bright days the air can sweep through and cure the tobacco. On rainy days the doors are closed to keep it from becoming too moist. This is called air-curing, and the curing process requires about six weeks. The tobacco of the Blue Grass country and of the Nashville Basin is usually air-cured. The tobacco of western Kentucky is sometimes fire-cured by putting stoves in the barn. The tobacco region extends from Nashville north and west to the Ohio River. Louisville is the principal market. Where else is tobacco raised in our country? (See Fig. 181, page 115.) Name some other famous tobacco cities. If you have forgotten these things, look in the index at the back of the book.

The Nashville Basin. The Nashville Basin is only a little less fertile than the Blue Grass country. It has more timber, and Nashville is a lumber center. The farm products are about the same as those of the Blue Grass, except that mules, as well as fine horses, are raised, and not so much tobacco. Nashville is the capital of Tennessee.



Tennessee Valley Authority

Fig. 270. This Tennessee farm was slowly being washed away by rains.



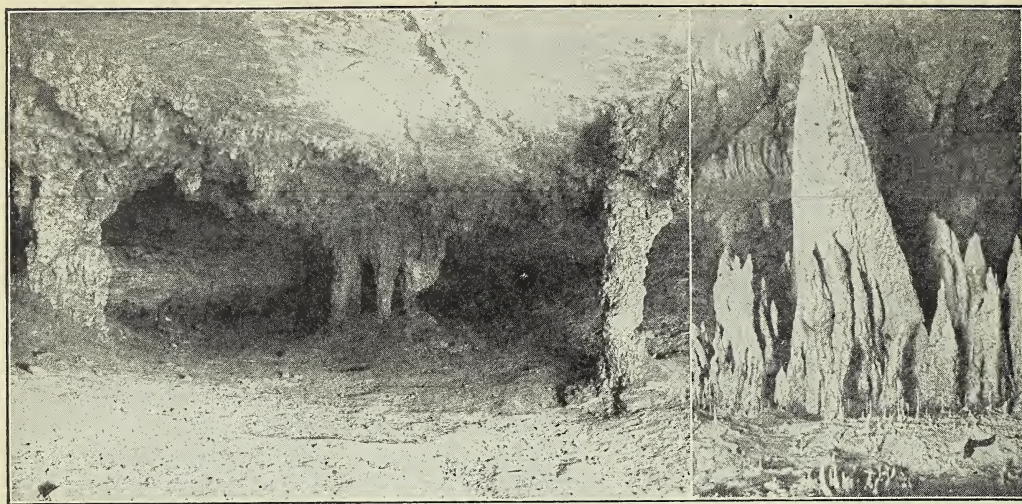
Courtesy Goodman—Memphis

Fig. 271. Cotton wharf at Memphis, the largest city in Tennessee. Here was a famous crossing-place for Indians on both sides of the river. French, Spanish, and Americans at different times built forts here.

The lowlands. The lowlands between the Mississippi and Tennessee rivers lie in the cotton region. Memphis, the largest city in Tennessee, is the greatest inland cotton market in the world. From the fact that Memphis is a cotton market, we know that cottonseed-oil and cottonseed-meal are manufactured there. In fact, Memphis leads the country in the manufacture of cottonseed products.

Both soft and hard woods are found near Memphis in Kentucky, Tennessee, Mississippi, and Arkansas. In Memphis, therefore, we find many wood-working mills; some make furniture, some farming machinery, and others boxes, barrels, handles, wheels, oars for boats, and numerous other hardwood articles. Memphis is also the largest hardwood lumber center in the United States. Two bridges cross the Mississippi River at Memphis. What two states do they connect?

Mammoth Cave. Underlying most of Kentucky and Tennessee is limestone rock. This rock dissolves in water rather easily; and because of this, many caves have been made in these states by the water dissolving the limestone. In this region we find the famous Mammoth Cave of Kentucky, the largest known rock cave in the world. Its beautiful and interesting caverns are said to reach for a distance of 150 miles. Not only does it have great rooms and hallways, but there are underground rivers and waterfalls! The cave is visited every year by thousands of tourists from all parts of the world. Long crystal stone forms called stalactites hang like icicles from the roof of the cave, and similar forms called stalagmites extend up from the floor. They gleam and sparkle like jewels as the guide turns his flash-light on them. There are also many smaller caves in this state and in Tennessee.



Courtesy Louisville and Nashville Railroad

© Keystone View Co.

Fig. 272. In Mammoth Cave, Kentucky, there are many scenes like these.

Of course some of this limestone under the earth in Kentucky and Tennessee is very useful. You have already learned some of the uses of limestone. What are they? Use the index to help you find pages that tell about limestone. There is also a fine grade of marble to be found in this region.

So you can easily see that Boone, Robertson, and the early settlers were not making a mistake when they poured over the mountains into the Kentucky country, with its rich soil, its forests, and its minerals.

QUESTIONS TO ANSWER

1. What is that part of the Great Valley in eastern Tennessee called? 2. What river has its source in the Tennessee Valley? What crops are raised by the farmers in the valley?

3. From where did the people come who settled the small valleys in the Cumberland and Allegheny plateaus? Why have they not had a chance to do any big farming? 4. What minerals have helped that section in the last few years? 5. Tell of the life of the mountain people.

6. How did the Blue Grass region get its name? Where is it? 7. Describe the products of the Blue Grass. 8. What part of Tennessee is best for farm-

ers? What are the principal crops there? Find two cities that are markets for the farmers' products. 9. In what two products is the Nashville Basin different from the Kentucky Blue Grass?

10. Can you see that Kentucky and Tennessee are divided into three sections? Can you mark them off on the map? What would you name them? 11. What two rivers run across the eastern side of the lowlands of Tennessee and Kentucky? 12. What crop do we find raised here that is not raised to any extent in other parts of this region? What city is the great trading center for this lowland region? 13. If you should go to Kentucky, what natural wonder would you visit? How was it formed?

THINGS TO DO

1. On the colored map and the wall map locate the following: Ohio River, Great Kanawha River, Cumberland River, Tennessee River, Tennessee Valley, Blue Grass country, Cumberland plateau, coal, iron, apples, cotton, horses, tobacco, Wheeling, Charleston, Louisville, Lexington, Nashville, Chattanooga, Memphis. 2. Put the same things on an outline or sketch map. 3. See if you can make a play of the first settlers coming into this region with Boone and Robertson as leaders. 4. If anyone in your class has ever visited Mammoth Cave, have him tell the class about it.

GEORGE ROGERS CLARK AND THE OHIO COUNTRY

Clark, the surveyor. George Rogers Clark was a tall, good-natured, red-headed Virginian, unusually strong and daring. He did not have much education, but he was good in arithmetic and an expert woodsman; he knew all the tricks of hunting, exploring, and Indian fighting. When he was nineteen years old, he became a surveyor, and for many years he spent his time across the mountains exploring and surveying the country along the Ohio. Young Clark wrote home at one time to his father, "I get a good deal of cash surveying on this river." He was with Boone in some of his Indian fights.

Clark settles in the Ohio Valley. Clark thought that the Blue Grass country along the Ohio to the south was the finest he had ever seen, and he finally persuaded his father and mother to leave the old Virginia home and settle near where Louisville now stands.

About the time the Declaration of Independence was signed, Clark made a journey to Virginia to get a supply of powder and bullets for the people of Kentucky in their fights with the Indians. It was a long, hard trip over the Wilderness Road that Boone had made. He lost his horse and had to travel on foot most of the 700 miles. When he reached Williamsburg, his feet were blistered and sore. He told his story to Patrick Henry, who was then governor of Virginia. Governor Henry gave Clark 500 pounds of powder and bullets and had them delivered to Pittsburgh. Here Clark built a boat to carry his load down the

Ohio River. The Indians gave him and his party some trouble, but they got the powder safely down the Ohio and up the Kentucky to the settlement. Clark then led the settlers in several fights against the Indians.

Clark plans to win the Ohio Country. The War for Independence was now being fiercely fought along the Atlantic coast. In the Ohio Country the British still held the old

French forts along the river and were stirring up the Indians against the American settlers. Clark thought that if he could capture the forts and drive out the British, the settlers could be protected and the country held for the Americans. Again he traveled all the way back to Virginia for help to carry out his plan. Governor Henry gave him several thousand dollars and the right to raise a small army to capture the forts. The guns, ammunition, and other supplies were delivered at Pittsburgh, as before.

Clark needed 500 men, but he could get only about 200. He did not worry over that, for he thought he could get more men from Kentucky to join him. So they built their

boats and started down the river, the men thinking that they were going to fight only the Indians. The little army was divided into groups, and they rowed as fast as they could all the time. The Indians had heard of the party and shot at them from the woods along the banks. When they came to an island above the falls near Louisville, they stopped to build a fort. Clark now told his men of his plans to take the British forts. Most of



© Keystone View Co.

Fig. 273. George Rogers Clark

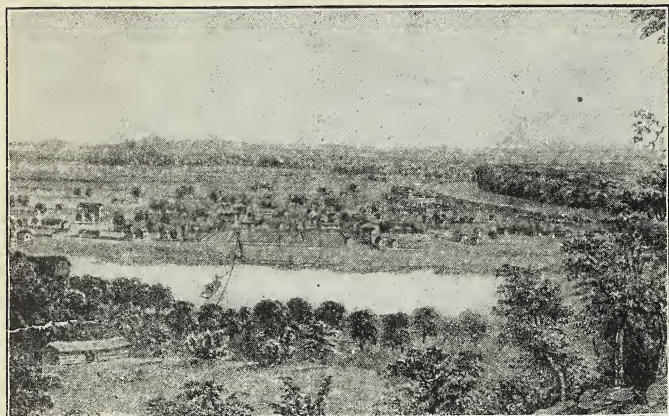


Fig. 274. The little village of Kaskaskia. The village with the mission founded by Father Marquette moved from its old site near Utica to its present location on the Mississippi.

them were ready to follow him wherever he might go, but a few left him and went back to their homes. Clark now had only 175 men, for few from Kentucky joined him; but he was not to be stopped from carrying out his plans.

The march on Kaskaskia. The brave little army rowed down the Ohio, and opposite the mouth of the Tennessee River, they landed and hid their boats. Then they marched northwest across what is now a corner of Illinois. Since they had no horses and wagons, they had to carry all their baggage on their backs. Through the woods, brush, and swamps of the river lowlands, they struggled until they came to the prairie. Here they had to march at night so that the English would not learn that they were coming.

On the evening of July 4, 1778, they came to the Kaskaskia River, at a place near where it flows into the Mississippi. Two scouts reported that the little town was quiet. About midnight Clark and his men captured the ferryman and made him carry them across the river. There was a dance at the fort that night, and they surprised the few sentinels on guard when they marched into the town. It is said that Clark walked into the dance-hall and stood quietly at the door

until an Indian saw him and gave the alarm. "Keep right on with your dancing," said Clark, "but you are now under the American flag, and not that of England."

Most of the people of Kaskaskia were French, and were very much frightened. The British had told them that the Americans were terrible men. The next day Clark called the people together, explained why the colonies had rebelled against England, and told them that France was helping the colonies. He asked them

to make a promise of faithfulness to the American government. The French had never liked the British rule, and they gladly pledged their loyalty to the Americans.

The capture of Vincennes. Father Gibault, the French priest at Kaskaskia, told Colonel Clark that he would be glad to help him, and suggested that Clark send him with a few soldiers to Vincennes. He felt sure that he could get the French there to join the Americans, and then they could take the fort. Clark sent Captain Helm and a few soldiers with Father Gibault. It turned out as the priest expected. The French joined them, and the American flag floated over the fort. On the map (page 187) follow Clark's journey from Pittsburgh to Kaskaskia, Cahokia (now East St. Louis), and Vincennes.

Cahokia is won. Colonel Clark also sent about thirty men to take the fort at Cahokia, where East St. Louis now stands. They marched almost day and night in order to surprise the British. When they reached the place, they were very tired, but they easily captured it. During the summer and fall Clark held many powwows with the Indians in that part of the country and won most of them over. One Indian chief said of him, "He talks like a chief and does not beg like a squaw."

The British take Vincennes. By this time the English general at Detroit, Hamilton, had heard what Clark had done. He was furious and said that he would soon drive Clark out of the country. He gathered an army of 500 men and came down Lake Erie. They paddled in canoes up the Maumee River, portaged across to the Wabash, and paddled down to Vincennes.

When General Hamilton came to the fort, he found Captain Helm standing at the gate beside a cannon. He thought there must be a large garrison inside, but somewhat to his surprise Captain Helm surrendered. So Hamilton allowed him and his men to march out, not as prisoners, but with flags flying and their guns in their possession. How disgusted Hamilton was when he saw Captain Helm march out with only three or four men!

Clark marches on Vincennes. Hamilton now sent most of his soldiers back to Detroit. He decided to go into winter quarters at Vincennes with the remainder of the army and wait until spring to march against Clark at Kaskaskia. That was where he made a big mistake; he didn't know Clark and his backwoodsmen. "I must take Hamilton, or Hamilton will take me," thought Clark. So he planned to surprise Hamilton by attacking him in midwinter, when Hamilton would never even dream of being attacked.

Clark built a big boat and sent his cannon and forty of his men around by the Ohio and Wabash rivers to meet him at Vincennes. With the rest of his men and some Frenchmen who had joined him, he began the two-hundred-fifty-mile march east across southern Illinois to Fort Vincennes on the Wabash River. Winter rains had thawed the ground, and the streams were swollen; so they had

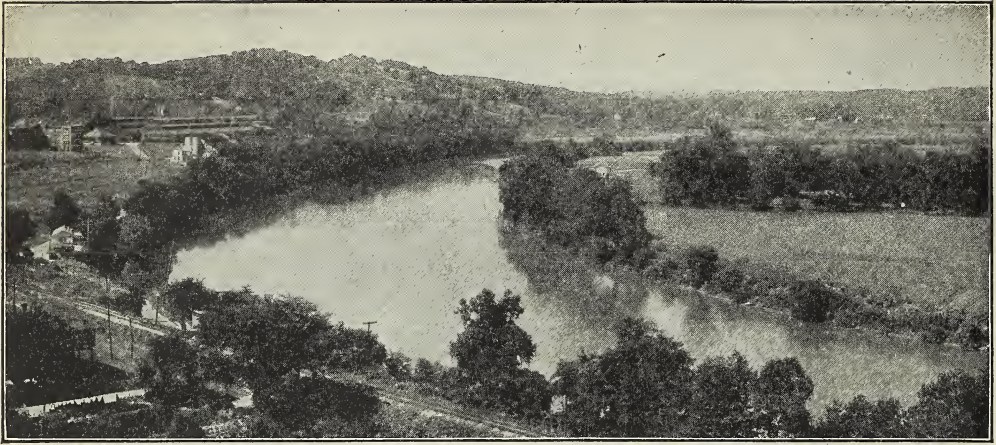


Fig. 275. On the march through the swamps the fourteen-year-old drummer boy had to be carried on the shoulders of the men.

to march through slush, sticky mud, and dirty water most of the way (Fig. 275). They could cross some streams by felling trees, but others they had to wade or swim. It was difficult to find a dry place to make a camp.

Clark's courage and good nature never left him. If a soldier said he was hungry, Clark gave him his food; if one had lost his blanket, Clark said, "Take mine. I have no use for it." He often sang to keep up the spirits of his men. Whenever they came to a stream, Clark was the first to plunge in. Men are always glad to follow such a leader.

Clark re-takes Vincennes. At last the Wabash River was crossed, and Vincennes lay only a few miles away. The little army stopped and made camp. The men who were strong and well built fires and made hot buffalo broth for the others. Soon these daring warriors were ready for the attack on the fort. While they were making their plans for the attack, a French hunter appeared, and Clark sent a letter by him to the people of the village. He told them that he was determined to take the fort that night, and that all friends of the Americans should stay in their homes.



Courtesy Marietta, Ohio, Chamber of Commerce

Fig. 276. Into this fertile Ohio Valley with its mild climate poured thousands of people through the gateway at Pittsburgh. Even Kentuckians who had followed Boone through Cumberland Gap came up and settled in Indiana. Along the Ohio and up the smaller rivers that flow into it the settlers cleared the land and started the towns and cities of today in southern Ohio, Indiana, Illinois, and northern Kentucky.

When the Americans marched into the town, Clark found that his letter had been put up in the town, but no one had told the soldiers at the fort. The townspeople were friendly, and those who had ammunition came out and gave it to Clark's men. Hamilton was very much surprised when the Americans fired their first volley into the fort. He manned the cannon at the portholes, but the backwoodsmen were crack shots and picked the gunners off as they stood beside their guns. The fight went on for twenty-four hours; then General Hamilton surrendered to Clark, and the American flag again floated over Vincennes.

The end of the war. Clark wanted to attack Detroit, also, but he could never get together a large enough army. He put men in the forts at Kaskaskia, Cahokia, and Vincennes to hold them and to protect the settlers. He made peace with the Indians of all that country and held it until the War for Independence was over. Because he did hold it, the treaty of peace with England made the Mississippi River the western boundary of the new nation. Had it not been for Clark's daring and wisdom in winning this great and

rich region, England probably would not have given it to the new nation.

Virginia gave Clark and his followers 150,000 acres of land in what is now the state of Indiana. Clark's share was 8000 acres, but this land did not do Clark much good. He could not gain much by selling it, for in those days there were millions of acres of rich land which could be bought for little. Clark had given his loyalty, his money, the best years of his life, and had won the whole Ohio region. The Government of the United States should not have allowed him to wait for anything, but he died a poor and disappointed old man. In the city of Indianapolis stands a fine monument to his memory, on which are these words: "General George Rogers Clark, Conqueror of the Country Northwest of the Ohio River from the British, 1778-1779."

The Pittsburgh gateway to the West was now wide open. There were no longer either French or English to stop the settlers from going down the Ohio to the rich lands of the Mississippi Valley. But before the Hudson-Mohawk-Lake Erie gateway could be opened, the Americans had to fight another war.



Fig. 277. One of the great victories of the War of 1812 was the capture of the British ship *Guerriere* by the famous American warship *Constitution*, or "Old Ironsides" as it came to be called.

THE WAR OF 1812

British forts on the Great Lakes. You remember that George III, king of England, waited for two years after Cornwallis was defeated at Yorktown before he would sign the treaty that made the United States free from England. Neither the king nor the English people had ever really given up the colonies. England thought that the colonies would quarrel among themselves and that she would get them back some day. For nearly thirty years after the War for Independence she kept soldiers in some of the forts along the Great Lakes, and the British traders kept the Indians stirred up against the Americans.

In 1811 Tecumseh, a Shawnee chief, got all the Indians of the Ohio Country to attack the Americans, and many white settlers were killed. General William H. Harrison, afterwards President of the United States, was sent against the Indians and finally met them on Tippecanoe River, a branch of the Wabash River in northern Indiana. He defeated

them so badly that never again was there a serious Indian war in the Ohio Country.

Trouble with England. For many, many years the French and the English had been bitter rivals. You have already learned that England drove them from America in 1763. Besides the fighting in this country there had been trouble in Europe between the two nations. Napoleon Bonaparte had become the ruler of France, and another bitter war broke out. England decided to starve out the French; so she issued an order forbidding ships of any nation to enter French seaports. Then France issued the order that no country should trade with England.

When American vessels tried to go to England, the French captured them, took their cargoes, and destroyed the vessels. If they tried to go to France, the English destroyed them. The English not only destroyed our vessels, but they also claimed the right to go on board our vessels and search for sailors

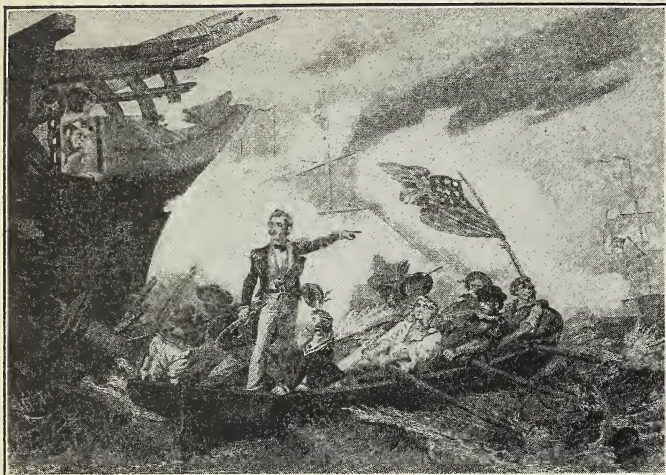


Fig. 278. The "Lawrence" is still at the bottom of Lake Erie but the "Niagara" is now kept in the harbor at Erie, Pennsylvania.

who had run away from English ships. England needed sailors badly on account of the war with France. Worst of all, England seized American sailors and took them on board their ships, always claiming that these sailors were Englishmen.

The United States was not a very strong nation at this time and did not have a very powerful navy. But the people of the country became more and more indignant at the way England was treating American ships and sailors. So the United States declared war on England in 1812.

Attack on Canada fails. England was so busy fighting France, and our country was so large, that all the fighting took place on the sea and along the edge of our country. The United States decided to try to take Canada away from England. Look at the map and you can see that the two countries come together at certain points along the Great Lakes. The Americans planned to send one army across the Detroit River and another one across the Niagara River. Then the two armies were to meet and go down the St. Lawrence River to capture Montreal and Quebec. A third army was to go up the Hudson and down Lake Champlain to join

the other two. But none of these plans were carried out, for the Americans were defeated at Niagara and at Detroit. It looked as though England would get control of all the Great Lakes. She might even take some of our country, besides.

Commodore Perry. British warships on Lake Erie were keeping the Americans from crossing the lake and from sending ships through the Detroit River to the upper lakes. So Captain Oliver H. Perry, a young man twenty-one years old, was sent to

Lake Erie to fight the British fleet. He found that he would have only four small ships. Some men would have been discouraged over this, but Perry only said, "We will build more ships." And he set his men to work in the woods cutting trees for ship timbers and hauling them to the shore.

All that spring and summer Perry kept the men busy cutting and hewing and nailing, until five more ships were ready. The guns and ammunition had been hauled across the country from Philadelphia and New York. Then one day the British fleet came in sight: six large ships with many big guns and trained sailors. The American ships looked very small, and the men were not trained. They had been building ships instead of training for war. But their hard work had made them tough, and they were fighting for their own country.

The battle of Lake Erie. Captain Perry in his flagship the *Lawrence* led the way. Soon a fierce battle was raging. The *Lawrence* was riddled by shot and started to sink. Perry and his twelve-year-old brother quickly jumped into a small boat and were rowed to another ship (Fig. 278). Bullets whizzed, splinters flew, and the boy's cap was

shot through, but they reached the ship safely. The fierce fighting went on until the whole British fleet was destroyed. Standing on the deck, with the smoke still hanging around him, Perry wrote this message on an old envelope and sent it to General Harrison: "We have met the enemy and they are ours." This victory drove the British from Lake Erie.

About the time of Commodore Perry's victory on Lake Erie, the Americans gathered an army in the West and placed General Harrison in command. This army marched to Detroit, captured that city, and chased the British into Canada. Other victories near Niagara Falls drove the British out and put the Americans in command of the Great Lakes. The next year the British tried to come into New York by way of Lake Champlain. On that lake they had a strong fleet and a large army. Captain Macdonough, a brave young commander like Perry, met the British fleet. He won a brilliant victory, and the British retreated to Canada.

"Old Ironsides." England had such a strong navy that she was called the Mistress of the Seas. She had defeated all the other navies of Europe, but from the beginning of this war our sailors surprised her. The Americans captured and sank several of proud England's best ships and won many battles. But the most glorious victory of all was when the American warship *Constitution* captured the British ship *Guerriere* off Nova Scotia (Fig. 277). Captain Isaac Hull was in command of the *Constitution*. He managed his ship so well and the American gunners shot so straight, that the *Guerriere's* masts were shot away in just one-half hour of fighting. There were so many holes in her hull that she was ready to sink, while the *Constitution* was hardly injured at all. This famous ship won many other battles, and the American people named her "Old Ironsides."

Washington burned—The Star Spangled Banner. A British fleet with an army on board sailed up the Potomac River, captured

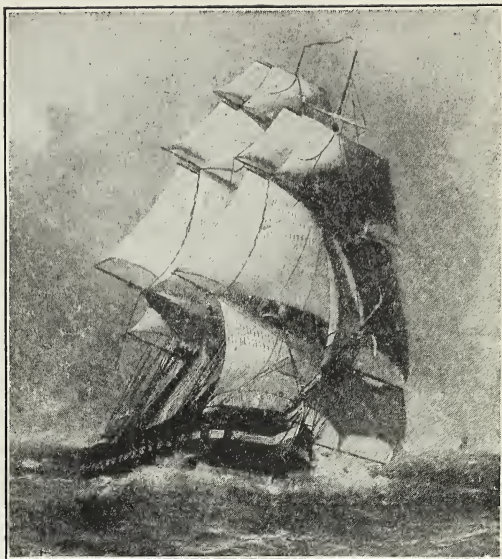


Fig. 279. The famous "Old Ironsides"

Washington, and burned the Capitol Building and the White House. Three weeks later they sailed up Chesapeake Bay to Baltimore. They thought it would be easy to take Baltimore, and then they could march right on and take Philadelphia. But the Americans at Baltimore had no intention of letting them capture and burn their city. All the men went to work on the fort and got it ready for the attack. When the British fleet sailed into the harbor, the guns of Fort McHenry opened a terrific fire, and the British guns replied.

A great American flag thirty feet wide and thirty-three feet long floated proudly over Fort McHenry. All night long the British guns fired shot, shell, and bombs at the flag and at the fort. Francis Scott Key, an American, had gone aboard one of the British warships to exchange some prisoners. All night long he heard the guns and feared the fort would fall. When daylight came and the Stars and Stripes were still there, Key wrote our national song—The Star Spangled Banner. As you read that song, you can almost see the fight.



Courtesy Baltimore Association of Commerce

Fig. 280. Old Fort McHenry still stands at the entrance to Baltimore harbor. Look at the picture on page 36. See if you can find the spot where the fort is located.

General Andrew Jackson. Andrew Jackson, born in North Carolina, was fighting in the War for Independence when he was only thirteen years old. At one time he was captured by the British, and a British officer ordered him to clean his boots. When the brave Irish boy told the officer that he was a prisoner and not a servant, the officer struck Andrew in the face with his sword. He carried the scar to his grave. Both of Andrew's brothers were killed in the war, and his mother died soon after. His father had died a few days before he was born.

At the close of the War for Independence young Andrew was without family or close friends; yet he managed to study law. After finishing his law course, he moved to Tennessee, where he became a planter, was elected judge, and later sent to Congress.

Jackson defeats the Creek Indians. When we went to war with England in 1812, Chief Tecumseh went among the Creek Indians in the South rousing them against the Americans. Five hundred settlers had taken refuge in Fort Mims near Mobile. The Indians captured this fort and killed nearly all the settlers. Then Jackson led the Tennessee troops into Alabama and defeated the Indians at Horseshoe Bend on the Tallapoosa River. The Indians were glad to give up. Some of them fled to Florida, then owned by Spain. The others gave up a great amount

of land in Alabama and Georgia. Now the Southern gateway was open, and white men could settle the country south of Kentucky and Tennessee.

Battle of New Orleans. Late in the War of 1812, news came that the British were sending a big army to capture New Orleans and the Mississippi Valley. As soon as Jackson heard the news, he marched his small army through the wilderness to New Orleans as fast as he could. He put the city under his own rule and ordered every man and boy in the city with their horses and mules to help get ready to meet the English. Just below the city they piled up a bank of logs and dirt. They tried also to use bales of cotton, but were afraid that they would catch fire.

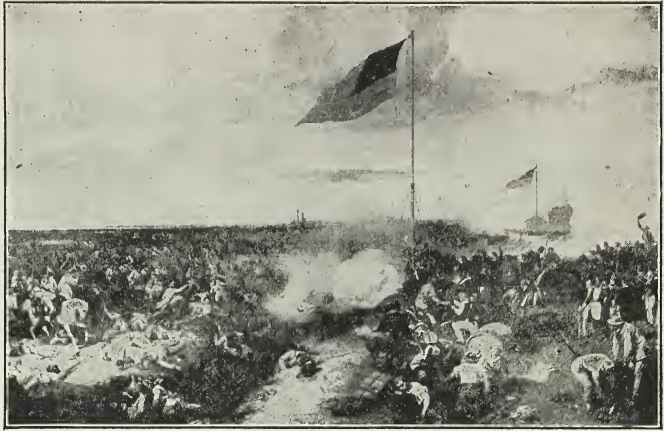
The British were trained soldiers. They had fought many great battles in Europe, and they made a fine appearance with their bright red uniforms and shiny guns. Most of the Americans had no uniforms. They wore the leather coats, pants, and coonskin caps of woodsmen, but they were used to hunting and could hit a squirrel as far as they could see him. Two thousand British were killed that day, but only seventy-one Americans. Very soon the British gave up their attempt to capture New Orleans. General Jackson had marched so far and worked so hard that his soldiers said he was as tough as hickory, and

Old Hickory became his nickname. The American people were so proud of him that he later became President of our country.

Peace. England saw that she could not hope to conquer the United States, and she had signed a treaty of peace in Paris two weeks before the battle of New Orleans. You see, the news had to be brought on a sailing ship and then by messenger on horseback. Now the land we had won in the War for Independence was really ours. After years of struggle against English, French, and Indians, the Mississippi Valley and the Ohio Country were open to the Americans. We shall now learn how settlers poured into this new region.

QUESTIONS TO ANSWER.

1. If you have studied the text carefully, you should be able to locate places not shown on the maps. For example, try to trace Braddock's road.
2. Follow the two rivers that Hamilton used in traveling from Lake Erie to Vincennes. What city is at the point where he left Lake Erie?
3. What good did Clark's trip do the United States when the treaty of peace was made with England after the War for Independence?
4. Name the five states made from the Ohio Country between the Ohio River and Canada.
5. How did it happen that England still held forts in the United States so long after the War for Independence?
6. Why should the British traders stir up the Indians and try to keep Americans out of that region?
7. Tell about the trouble between the United States, England, and France on the seas.
8. Where was most of the fighting of the War of 1812?
9. Have one of the class tell the story of Commodore Perry on Lake Erie.
10. Where were the Creek Indians that General Jackson whipped? What effect did that have on the Southern gateway?
11. How did Jackson save Louisiana for the United States? How did it happen that the battle of New Orleans was fought after the



From the painting by Lami. Courtesy Louisiana State Museum
Fig. 281. The battle of New Orleans in the War of 1812

two countries had agreed to stop the war? 12. What effect did the winning of the War of 1812 have on the gateways to the West?

THINGS TO DO

1. On an outline map show Clark's trip from Williamsburg up the Potomac, over Braddock's road, and down the Ohio to Kaskaskia, Cahokia, and Vincennes. Show these places on your map, and also the route that General Hamilton followed from Detroit to Vincennes. 2. Try to make a picture of the fort at Vincennes, showing Captain Helm marching out with his three men to surrender to Hamilton and his army. 3. Prepare and tell to the class the story of "Old Ironsides." 4. Write the story of how we got our song "The Star Spangled Banner."

Books to read: Brigham, *From Trail to Railway*, pp. 142-154; *Compton's Pictured Encyclopedia*, pp. 1916-1919, 3465-3469; Davidson, *Founders and Builders of Our Nation*, pp. 101-108; Eckinrode, *Told in Story*, pp. 258-271; Evans, *The Trail Blazers*, entire; Henderson, *Conquest of the Old Southwest*, pp. 130-159; Hubbard, *Little American History Plays*, pp. 125-129; Nida, *Following the Frontier*, pp. 39-53; Otis, *Hannah of Kentucky*, entire; Roosevelt and Lodge, *Hero Tales from American History*, pp. 15-24, 27-36; Smith, *Human Geography*, Bk. II, pp. 145-152; Tappan, pp. 200-207; Woodburn and Moran, *The Makers of America*, pp. 113-117, 150-168.

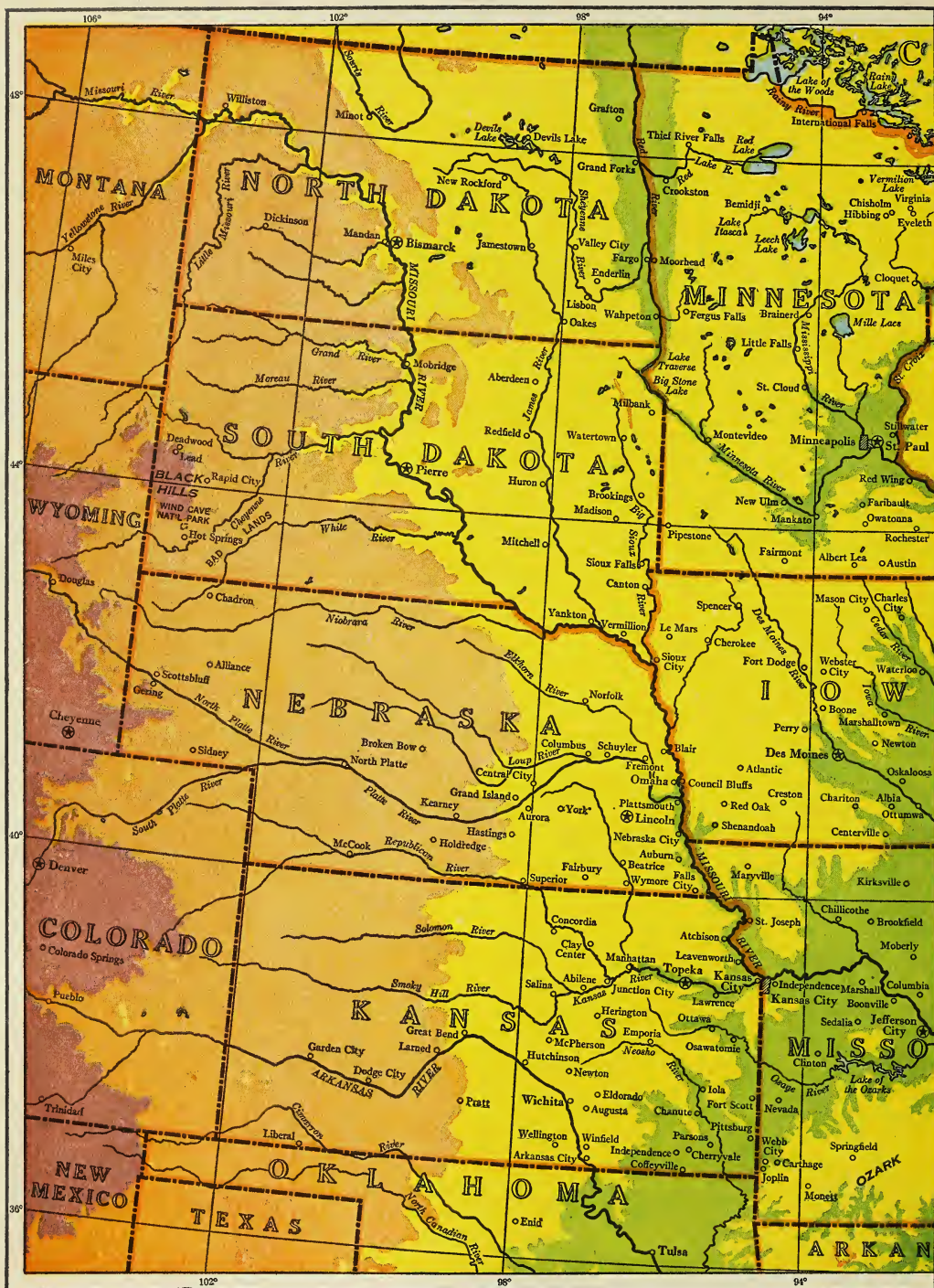


Fig. 282. Map of the North Central states



Courtesy Maryland Historical Society

Fig. 283. A scene in Maryland on the road to Pittsburgh in the days when people moved by the thousands from the states along the Atlantic to the rich Ohio Valley.

THE SETTLEMENT OF THE NORTHWEST TERRITORY

FLATBOATS AND CONESTOGA WAGONS

When the colonies became states, Virginia claimed the entire Ohio region that George Rogers Clark conquered and saved for his country. But New York, Connecticut, and Massachusetts also claimed all or part of this same region. So to avoid trouble, all of these states agreed to give their claims to the United States. This region was then known as the Northwest Territory. Today, with the states just across the Mississippi River, it forms what we know as the North Central states. Study the map on pages 186 and 187 so that you will know what these North Central States are. You will soon learn why these states are sometimes called the "granary, the pantry, and the cellar" of our nation.

The gateway at Pittsburgh. When the War for Independence closed, the Northwest Territory was a vast wilderness except for a few forts and tiny settlements. And then people by the thousands began to pour into the Ohio Valley through the gateway at Pittsburgh. From Virginia and Maryland, from Pennsylvania and New York, from New England and old England, from Ireland and Scotland, and from Germany and France they

came; all roads seemed to lead to Pittsburgh. The people had good reason for swarming into the Ohio Country. In New England the winters were long and cold, and the soil was rocky, thin, and poor. In the Ohio Valley the climate was much milder and the soil was rich. There was plenty of good land for everyone. Here was a region where the poor man could get a new start. Before long this region began to look like a garden.

The new settlers hauled their families and their most precious belongings in what were then called Conestoga freight wagons, drawn by four or six horses or oxen (Fig. 283). The body of the wagon was curved up at the ends to keep the freight from sliding out. The top was covered with a canvas stretched over bows, which made the wagon look like a sailboat. The women and children rode on top of the goods, while the men walked and drove the teams. At night the women and children slept on beds spread on top of the goods in the wagon, while the men slept before the campfire or under the wagon.

Flatboat travel down the Ohio River. A few of the more daring people drove right on through the Pittsburgh gateway and made



Fig. 284. Sometimes hundreds of families would be waiting along the banks of the river at Pittsburgh until their flatboats or rafts were built. Even in those early days coal was being mined around Pittsburgh, and glass, iron, shoes, and saddles were being manufactured for the new settlers to the west.

their way overland to their new homes. Most of the settlers bought, built, or hired, flatboats or barges at Pittsburgh on which they floated down the Ohio River. This was easier, and there was less danger from the Indians. Besides, being on the river it was easy to choose a good place along the bank to settle; or they could follow one of its branches until a good location was found.

It is said that in the year 1787 "more than 900 boats floated down the Ohio, carrying 18,000 men, women, and children; 12,000 horses, sheep, and cattle; and 650 wagons." Whole settlements in the East left their rough hill farms for the rich level lands of the West. A colony from Massachusetts settled Marietta, at the mouth of the Muskingum River. A colony from New Jersey settled what is now Cincinnati. Later, thousands of Germans from Pennsylvania and even from Germany came here, until Cincinnati became largely a German city. Many settlers came from Kentucky and Tennessee into the southern part of Ohio, Indiana, and Illinois. After the opening of the Erie Canal in 1825,

many more people came into the northern part of Ohio from New York and New England by way of Buffalo and along the southern shore of Lake Erie. They also sailed across Lake Erie to Detroit and settled Michigan. Wisconsin and Minnesota were settled by people from New England, New York, Michigan, and Illinois. In one year nearly 100,000 people passed through Buffalo on their way to the West. A man in New England wrote:

Come all ye Yankee farmers who wish to change
your lot,
Who've spunk enough to travel beyond your native
spot,
And leave behind the village where pa and ma do
stay,
Come follow me and settle in Michigan-i-a.

As we speed over our fine highways, we can hardly imagine the terrible roads over which those first settlers traveled when they crossed the mountains into the Ohio Country. Many times wagons could not be used at all. Pack horses had to carry the goods to and from the East. Finally the United States government built a road from Cumberland on the

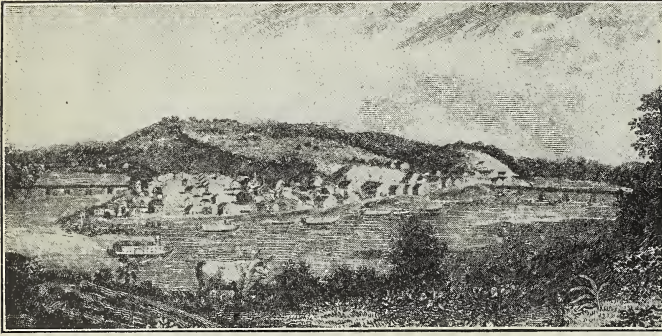


Fig. 285. Pittsburgh in the early days. Now look at Fig. 158, page 102.

Potomac River through Wheeling, Columbus, Indianapolis, and Terre Haute to Vandalia, Illinois—the Cumberland National Road. Other roads were gradually made better and better, and traveling became easier.

But for many years after the first settlements were made, people traveled down the river instead of by land. The building of flat-boats became a regular business for men who liked river life. These men would build a boat, pilot the new settlers down the river to the settlement of their choice, and leave them. Sometimes the settlers bought the boat and used the lumber in building their new homes. After unloading the settlers and their goods, the boatman would buy meat and grain, or lumber, re-load his boat, and float on down the river to New Orleans. There he sold the cargo, and the boat too, for it was hard work to row such a boat back up the stream. Then our boatman would either walk back home or paddle back up the river in a canoe, and do the same thing over. Then came the steamboat.

STEAMBOATS AND RAILROADS

Fulton and the *Clermont*. When Robert Fulton was a boy, he was always trying to make something new. One morning he was late at school. "Where have you been, Robert?" asked the teacher.

"I have been making myself a lead pencil," replied Robert. "It is the best one I ever had." He gave the pencil to the teacher, and she too thought that it was a good one. Robert liked to go fishing with his chum, but the boat they used was hard to row. So Robert rigged up two paddle wheels, and put one on each side of the boat. Then he turned them with a crank by hand.

For a time Robert did not know whether he wanted to be an inventor or an artist, for he liked to paint as well as to invent things. He finally decided to go to England to study painting. There he saw a steam engine invented by James Watt. He heard that someone had tried to run a boat with one, but that it had not worked very well. Fulton felt sure that he could make it work, but he had no money. He went to Paris and Robert Livingston, who was the American minister, or representative, to France, gave him the money he needed to help him build a boat.

Fulton made a boat that would go, but it would not go fast enough to suit him. He decided that the old engine would not do; so he had Watt build one just as he ordered it. Then Fulton came back to New York to build his boat. The steam engine was to turn paddle wheels in the water on each side of



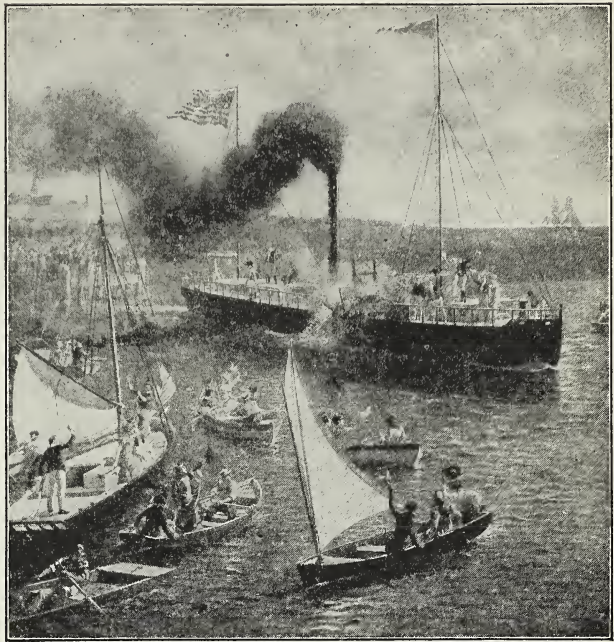
Fig. 286. Early Cincinnati. Compare this with Fig. 348, page 228.

the boat, just like those that Robert turned by hand on his rowboat. People said Fulton was foolish to think such a thing could be done. They made fun of the boat and called it *Fulton's Folly*, but Fulton named it the *Clermont*.

Success! On a hot August day, 1807, Fulton invited some of his friends to ride with him up the river to Albany. People heard of this, and a big crowd gathered at the wharf to see the boat start. They expected to see the new invention blow up. Fulton gave the signal, the engine hissed and puffed, the boat moved a little way; and then it stopped!

The crowd at the wharf laughed and jeered. Fulton's friends looked scared. He heard one say, "I told you so. I wish I were out of the thing." Fulton was not worried, for he knew that he could make his engine work. He asked his friends to wait a few minutes, saying that he would either have the boat going or give up the trip. He made some little repair on the engine, and the boat moved off up the river, "against wind and tide, breathing flames and smoke." Some of the men in sailboats on the river were terribly frightened when they saw this queer-looking thing without sails coming toward them like a great dragon belching fire and smoke. They even ran their boats ashore to get out of the way.

The *Clermont* steamed from New York to Albany in thirty-two hours. It sometimes took a sailboat five days when the wind was against it. Fulton had proved that a boat could be run not only without wind but against it. In just a few years the *Savannah*, using both steam and sails, made the trip from Savannah, Georgia, to Liverpool, England. This was the first steamboat to cross the Atlantic. The trip took twenty-five days.

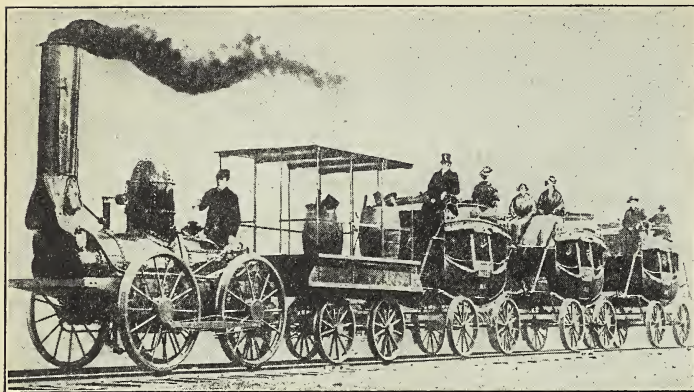


Painting by Ogden. Courtesy New York Historical Society

Fig. 287. Fulton's triumph. The *Clermont* starts on its first voyage from New York to Albany.

How long did it take Columbus to cross the ocean? How long does it take an ocean steamer today? Before long steamships took the place of even the famous Yankee clipper sailing ships.

Soon steamboats were running on the Ohio and Mississippi rivers and the Great Lakes. By 1820 they had taken the place of many flatboats. Road building was such slow work and river traveling was so easy that people planned to connect the rivers and lakes with canals instead of building roads. You know the story of the Erie Canal, which helped so much in carrying farm produce from the lake country to New York. Other canals connected the Delaware and Hudson Rivers, and the Ohio River at Cincinnati with Lake Erie at Toledo. Still another connected Portsmouth on the Ohio with Cleveland. Another was dug from Lake Michigan to the Illinois River. Other canals were planned, but the railroad came.



Visual Education Service

Fig. 288. The DeWitt Clinton, the first railroad train in New York state.
Who was DeWitt Clinton?

The coming of the railroads. In the story of New York you read about the building of the Erie Canal. You recall that as New York City began to grow, produce from the Central States began to come to that city instead of going to Baltimore. To get back their trade, the people of Baltimore decided to build a railroad to the West. As railroads are so important to us, we shall learn their story in America.

James Watt. James Watt, an Englishman, invented the steam engine, and Robert Fulton had him make the engine that he used in his steamboat, the *Clermont*. "Rail roads" were known even before the steam engine was invented. Wooden rails had been used to make it easier for horses to haul heavy loads. Strips of iron were used on top of the rails to keep them from wearing out so quickly.

Peter Cooper. In 1825 George Stephenson, a Scotchman, built the first steam railroad in England. A man on horseback rode ahead of the train to warn the people off the track. One man asked Mr. Stephenson, "Suppose a cow should get on the track?" "It wad

be verra bad for the coo," he replied. Stephenson had said that steam engines could not make the short turns through the mountains west of Baltimore, but Peter Cooper, who owned land near Baltimore, was determined to have this railroad built. He thought that a railroad would bring trade to Baltimore, and that therefore he could sell his land for a good price. "I believe I can build a steam engine, or locomotive, that

will work even in America," said Cooper.

The first railroad locomotive in America. Cooper went to work. He bought a small brass engine with a boiler about the size of a barrel. He used the barrels of two shotguns for certain tubes that he needed. When the locomotive was finished, it was about the size of a small truck. It weighed less than a ton, and Cooper named it the Tom Thumb. On a Monday morning Cooper took some friends with him for the first trip. The rails had been laid for thirteen miles, and the Tom Thumb ran the thirteen miles in one hour and twenty minutes. Not very fast, was it?

The men who owned the stage coaches said that one of their horses could outrun the steam engine. So they had a race. For awhile the horse and the engine ran neck and neck, until the horse grew tired and the engine began to run ahead. The engine



Fig. 289. The race between the horse and the Tom Thumb

The first railroads. Many improvements had to be made on the first locomotive before it was strong enough to pull heavy loads. The building of the first railroad was a tremendous job. There were rivers to cross and hills to climb, and the people of those days knew very little about railroad building. It was twenty-five years before the Baltimore and Ohio railroad was finished to Wheeling, West Virginia, on the Ohio River. In the meantime a railroad was being built along the old Mohawk Trail from Albany to Buffalo. It was built, as it were, in pieces. Different

Fig. 290. Read this old advertisement carefully. What is the train time from Philadelphia to Pittsburgh today?

companies did the work, and each company owned its section of the railroad. By the year 1843 a traveler could cross the state of New York by rail, but he was carried by sixteen different companies and had to change trains every time he went from one section to the next. In time, all these different sections were joined into one railroad, the New York

Courtesy Chicago Historical Society

Fig. 291. Read this old railroad ticket carefully. From New York to Buffalo what three means of travel had to be used? For which part of the journey would each means of travel be used? What famous trail did the route follow? What railroad follows it today?

Central, which ran from New York City to Buffalo. This was the first railroad to connect the East with the Great Lakes region. The Pennsylvania, the Erie, and the Baltimore and Ohio railroads were completed to the West at about the same time. Locate two of these railroads on the railroad map (page 374). Notice also how the Central States are criss-crossed with railroad lines.

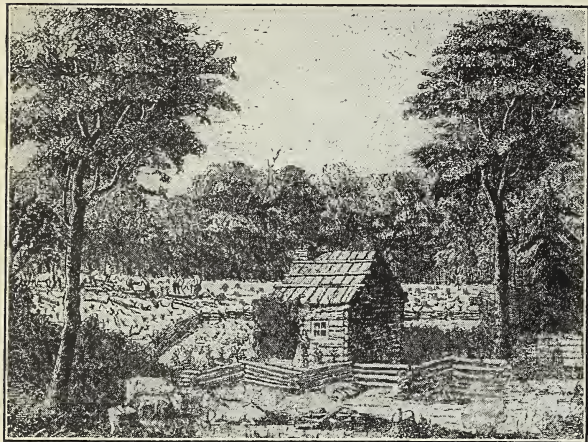


Fig. 292. A pioneer home in the Ohio Country

WHAT THE COUNTRY WAS LIKE

Now let us learn why the country in the North Central States is so fine for farming. You remember that the great ice sheet gouged out the holes for the Great Lakes. As it moved on south, it pushed along in front of it the great masses of rocks and dirt that it dug. The ice itself carried millions and millions of tons of fine, rich dirt. When the ice sheet melted, the fine, rich soil was left in a thick layer on all this region.

The United States government surveyed, or laid out, the Ohio Country in squares by running lines one mile apart east and west and north and south. Each square mile was called a section, and contained 640 acres. These sections were then divided into four equal squares of 160 acres each, called quarter-sections. These quarter-sections were then either given to the new settlers or sold to them for from fifty cents to two dollars an acre. The roads which were built along the lines of the squares were often as straight as an arrow for miles and miles.

As you know, most of this region was covered with a vast forest of oak, hickory, elm, and other hardwoods when the white men first came. But

there were wide, treeless, grassy prairies in some parts, especially in what is now Illinois, Iowa, and northern Missouri. That is why these states are sometimes called prairie states. The first settlers came from a forest country, and they did not think the prairies could be good for farming. They found later, of course, that the prairie soil was the best. It did not have to be cleared of trees and was much easier to work.

The settler's first task was to build a cabin. A "smoke-house" for curing meat and a crib for storing corn were next built. There were no cellars; so butter and meat were kept fresh by hanging them in the well where it was cool. Cattle pens were built of rails split from logs. When there was no danger from wolves and panthers, the animals were turned loose to feed where they pleased. Bells were hung on their necks so that they could be found. In the forest regions the settler had to clear away the trees so that crops could be planted. In the winter season the farmer girdled, or cut, a ring of bark around some of the trees so that they would die. The leaves would not come out in the spring and shade the crops. Then the crops were planted around these girdled trees. The next winter, when



Courtesy U. S. Forestry Service

Fig. 293. These trees have been killed by being girdled.

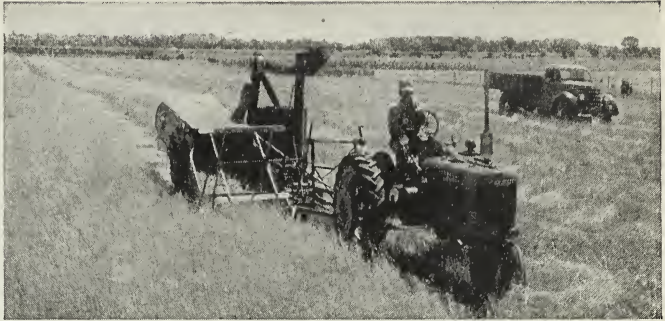
the farmer had more time, he would cut and burn these trees and finish clearing the land of the tree stumps.

Each farmer raised his own corn, wheat, vegetables, cattle, and hogs—enough to supply the family with food. Fish from the rivers and streams also helped. The settler grew flax and raised sheep to supply the family with linen and wool for clothing. The family washing was done on the river bank where there was plenty of water and dry driftwood for fire. Money, especially small coins, was scarce in the new country. Silver dollars were often cut in halves and in quarters with a hatchet so that the settlers could have twenty-five and fifty-cent pieces. Of course, with so little money there was much trading of one thing for another. You read about this when you studied the New England states. Certain articles were often used as money; for example, animal skins, whisky, or corn. Thus, a pair of shoes would be worth so many skins. It is often like this in new countries where money is scarce. The early Virginians even used tobacco for money.

QUESTIONS TO ANSWER

1. Where was the Northwest Territory? What states were made from it? 2. Why did so many farmers leave New England for the Ohio Country? What gateway did they use? Why for thirty years did they not use the Mohawk Trail? 3. How did these people travel across the country to the gateway? 4. In what part of the Northwest Territory did the people from New York settle? 5. What business grew up on the Ohio River because of people moving west? Tell all you can about it. 6. Explain how the building of canals helped to settle these states. 7. Tell how the flatboats were finally put out of business.

8. Tell the story of Robert Fulton and his invention. 9. Why was it so difficult to build roads



U. S. Department of Agriculture

Fig. 294. Harvesting oats on a Central States farm. The brave men and women who fought off the Indians and cut their little farms out of the forests and the tough prairie sod made possible the fine farms and prosperous cities of the North Central states.

in those days? 10. Can you think of a reason why the first national road was built just where it was? What railroad follows the same route for a long way? Were the builders right in thinking that road would be fine for bringing meat and grain from the West to Baltimore? 11. What effect did the building of railroads have on the building of canals? 12. What railroad runs from your home to the nearest seaport?

13. Why was the land of the Northwest Territory so good for farming? What is meant by a "section" of land? 14. What was the Northwest Territory like? 15. How did the settlers clear the land of trees? 16. Why did they at first think prairie land was not good? 17. Tell all you can of pioneer life in the Territory.

THINGS TO DO

1. See if you can make a picture of a Conestoga wagon and the oxen or horses that pulled it. Also draw a flatboat. 2. Trace the Cumberland, or first national road, and locate the towns through which it passed. Find whether that road is still used.

3. See how good a story you can write of a trip by a flatboat owner to New Orleans and back to Pittsburgh. 4. Turn to the railroad map and trace the Baltimore and Ohio, Chesapeake and Ohio, New York Central, and Pennsylvania railroads. 5. Place the roads and the cities mentioned on an outline map; also the canals. 6. If you live in the country, try to find how good roads have changed and helped the region where you live.



U. S. Department of Agriculture

Fig. 295. Haying time in Ohio. Hitched to the wagon is a loader which, as it is pulled along, throws the hay onto the wagon, where the men spread it evenly.

THE NORTH CENTRAL STATES

THE STORY OF CORN, WHEAT, AND OTHER SMALL GRAINS

A TYPICAL CENTRAL STATES FARM

We are off for an automobile trip through these states from Ohio to the dry western plains. We go through many towns, villages, and large cities, and we pass thousands of fine farms and farmhouses. As we know, some farms in this section grow corn, while others raise wheat, cows, and poultry; but most of them raise several things. Let us imagine we know a Mr. Wood, who has a 160-acre farm in Illinois. He has a hundred acres of corn, twenty acres of pasture, twenty acres of clover or other hay, ten acres of oats, five acres of potatoes, three acres of orchard and garden, and the rest for yards and buildings.

We know Mr. Wood's place by the big elm

tree beside the front gate and the white picket fence around the green, well-kept lawn. Flower beds run along the walk that leads to the front door of the neatly painted house, white with green blinds. Mr. Wood invites us to drive in and look over his farm. Back of the house and the garage he has a fine garden with all kinds of vegetables. To one side of the garden are the chicken house and the chicken yards.

Let's take a peep into the big barn over there to the left, with the barnyard, silo, windmill, corn cribs, and hog pens close around it. First of all when we open the barn doors, we see mows piled high with hay, bins of clean threshed oats and shelled corn. Mr. Wood tells us that he has just bought one hundred hogs, fifty steers, and fifty sheep. To these he will feed the grain he has raised, and thus fatten them for the market. He also tells us that by doing mixed farming he has something to sell every month of the year.

Out in the oat field back of the barn, we see the drove of turkeys that Mr. Wood will sell to the city people for their Thanksgiving dinners; and there at the edge of the garden stand a dozen beehives from which Mr. Wood has just taken several pounds of



U. S. Department of Agriculture

Fig. 296. In these hives the bees store the honey which they gather from the flowers. It is their food, but man takes part of it from them for his own use.



U. S. Department of Agriculture

Fig. 297. The Corn Club learns which ears will make the best seed corn.

honey (Fig. 296). The bees are buzzing around us; so we had better hurry past. As we walk through the tool house, we see all the up-to-date tools needed for farm work.

THE CORN AND HOG BELT

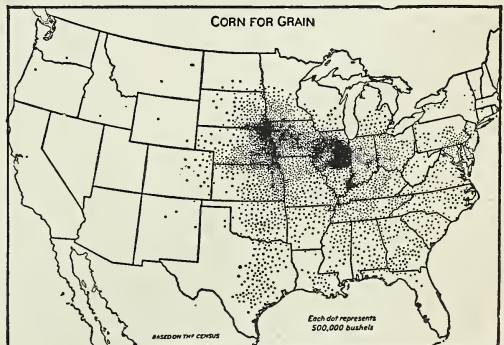
Look at the corn map (Fig. 298) and notice the section with so many dots that it is almost solid black. That is the Corn Belt. More corn is grown in this belt than in any other one section in the world. You will see from the map that the Southern states, too, raise much corn; but soil and weather are just right in this Corn Belt of the Central States for raising great quantities of this grain that white men had never seen until they came to America. Here is a story of a boy who lives in the Corn Belt.

Mark, the "corn club" boy. Mark is a fourteen-year-old lad who lives with his parents on a large farm in the great corn belt. Mark belongs to a corn club, along with the other boys in his school. Each boy in the club raises an acre of corn without help from anyone else. He tries to raise the best, for in the fall a prize is given the boy who can show the best and most corn grown on an acre of ground. Mark's father gave him a rich acre of land in one corner of the farm.

Planting the corn. About the middle of May, when the spring frosts are over, Mark

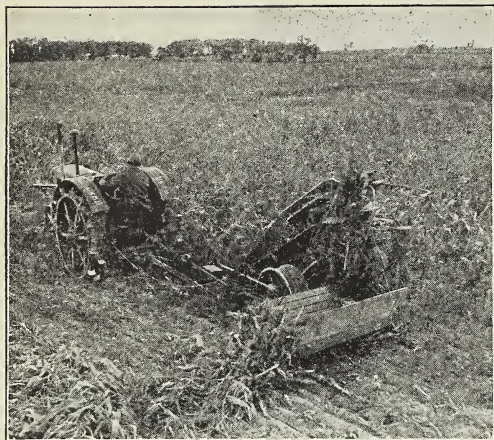
plants the seed. He uses a corn planter which drops four or five kernels in each hill, about three feet apart each way. As soon as the tiny plants appear above the ground, Mark begins to cultivate the ground between the rows to kill the weeds and to keep the ground loose and light. Thus it will hold moisture better. There are many thunder-showers and weeks of very warm weather in this section. Such weather, with the rich soil and level land so easy to plow and to work in, makes corn grow well.

Mark cultivates his corn often, until the stalks are as high as his head. He is happy as he dreams of the prize that he hopes to win. Soon the corn is higher than Mark's head, and yellow tassels begin to appear on



U. S. Department of Agriculture

Fig. 298. Where corn is grown in the United States



Courtesy J. I. Case Co.

Fig. 299. A corn binder at work

the tops of the stalks. Grains of corn begin to form on the ears that shoot out from the sides of the stalks. It will take about 160 days for Mark's corn to ripen. The sweet corn in the garden ripens much more quickly.

Harvesting the corn. When the corn is ripe, Mark cuts the stalks with a long knife. Then he stacks several armfuls of the stalks together on end, ties them in shocks, and leaves them out in the field so that the ears will dry. His father has a corn binder (Fig. 299) that cuts the stalks, ties them in bundles, and deposits the bundles on the ground in piles. When the ears of corn are dry, they are either husked in the field or pulled from the stalks with the husks on and hauled to the barn to be husked and stored in the corn crib. The kernels are shelled from the cob by a machine called a corn sheller.

Testing for seed corn. Mark picks the largest and best ears of his corn for seed. He numbers the ears and hangs them up in the husks to dry. Then he tests each one. For the testing he has a long cotton sheet with small pockets. He puts a few kernels from an ear into a pocket, and gives this pocket the same number as the ear from which the grains were taken. He does this with each ear. Then he moistens the sheet, rolls it up,

and puts it in a warm, dark place where the seeds will sprout. When he unrolls the sheet, he can tell which kernels have sprouted best. He saves the ears from which the best kernels came for next year's seed.

The time comes for the county exhibit at which the corn is to be judged. Along with the other boys Mark picks out the best of his corn for the contest, and he is happy when the judges tell him that he has raised the best corn of all the boys that year.

Mark may raise as much as 100 to 150 bushels of corn on his one acre, because of the extra care he gives it. His father's big fields yield from thirty to sixty or seventy bushels an acre. The United States produces about two and a half billion bushels of corn each year, and the Central States Corn Belt produces over half of this amount.

The importance of corn to the early settlers. When the corn-club boys studied the history of the grain for which this section is famous, they were surprised to learn that before the days of Columbus, no white man had ever tasted corn on the cob, or in any other form. True, they had read of corn in the stories of the olden times, but corn was the general name given to all grains. Today we have many kinds and sizes of corn, from the



© Detroit Publishing Co.

Fig. 300. A field of corn in shocks

small pop corn to the mammoth kind that grows fifteen feet tall.

The boys also learned how important corn was as a food in the early pioneer days. Great was the joy of the early settlers when the corn grew high between the stumps on their newly cleared land, and the first juicy ears were ready for roasting! The old settlers said that after a winter of living on meat, a loaf of corn bread, or johnny cake, baked on a shovel tasted better than any Thanksgiving turkey.

For many years a favorite food of the settlers was hog and hominy. Hominy was made by soaking the whole grains of corn in weak lye to remove the hulls. It was then cooked for hours until it was soft, and eaten with pork or other meat. But corn meal (ground-up corn) and milk was the usual food. Even bread was made from the rough corn meal. Today our corn meal is much finer, for our mills that grind it are better.

Uses of corn. The uses made of corn were as interesting to the boys as its history. Every part of the corn may be used for something. The stalks may be cut while still green and



Courtesy International Harvester

Fig. 301. A silo. The tractor is running a machine that cuts the corn stalks into small pieces and blows them up the pipe into the silo.

tender and stored in a silo to be fed to the cattle in the winter (Fig. 301). This corn stays green like the vegetables Mark's mother seals in glass jars for winter use.

Not only is the ripened grain used as food for hogs and cattle, and meal and hominy for people, but many other foods are made from it. Corn flakes for our breakfast are made from cracked kernels which are sweetened, salted, cooked by steam, and rolled into flakes. Then there is corn syrup for our hot-cakes, cornstarch for pudding, and starch for clothes. Alcohol and a fine oil which may be used instead of olive oil are made from corn.

The plant, or stalk, is used for making many useful articles. The outside of the stalk is sometimes made into paper, and the inside, or pith, is used to make guncotton and smokeless powder. The cobs may be used as fuel, and the husks shredded to stuff mattresses. Another product is imitation rubber, made from corn-oil mixed with sulphur.

Corn and hogs. Our friend Mark belongs to a pig club as well as a corn club. In the spring Mark's father let him choose a baby pig from among ten little ones. Mark named his pig Major, and set out to win a prize with him in the fall. As soon as Major was big enough to drink milk by himself, Mark put



U. S. Department of Agriculture

Fig. 302. Roy Nicholson, a Missouri pig-club boy, with his Hampshire hogs

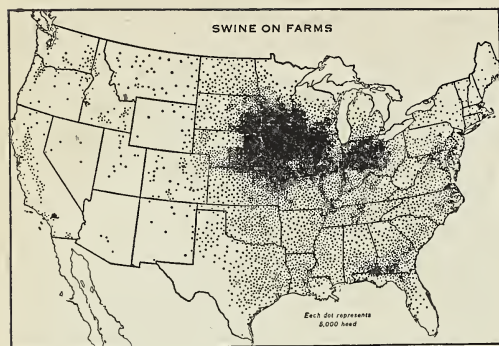


Fig. 303. Where hogs are raised in the United States. Which is the blackest state?

him in a pen and fed him regularly on skimmed milk and corn meal. Through the summer Mark turned him into a field of clover, but still fed him milk. By fall, Major had grown long and tall. Now Mark penned him up again and to fatten him fed him some of the corn grown on his acre. He also gave him some other kinds of grain to harden the meat and make him look sleek and nice for the contest and the market.

Mark's father and nearly all of the other farmers in the Corn Belt have many hogs. This is the Hog Belt, as well as the Corn Belt (Fig. 303). It is easier and more profitable to feed the corn to hogs to be sold as pork than to ship it. It takes five pounds of corn to make one pound of pork. You can see how much is saved in freight by feeding the corn to the hogs. Then too, the hogs help to gather some of the corn. When they are turned loose in the corn fields, they pick up all the stray ears. Sometimes the hogs are turned into a field before the corn has been cut; then the hogs gather the corn themselves and save the farmer the trouble. This is called "hogging-off" the corn (Fig. 304).

Just as the Corn Belt produces more than half of the corn grown in the United States, so it produces more than half of the pork. In riding through the Corn Belt, one cannot go many miles at a time without seeing both

corn and hogs. They seem to be everywhere. Great trainloads of live hogs rush past on their way to Chicago, Kansas City, Omaha, St. Louis, Cincinnati, Indianapolis, and other meat-packing centers, where they will be cut up into ham, bacon, and pork for us.

WHEAT AND OTHER SMALL GRAINS

The importance of wheat. One of the most beautiful sights in the world is a field of wheat. As far as the eye can see, the tall grain seems to move in glistening green waves as the wind blows over it. As the wheat ripens, the green turns to a pale gold under the hot summer sunshine. Then it is more beautiful than ever. Even after the grain is cut and piled in dome-shaped shocks, the fields are still beautiful, for the yellow stubble gleams in the sunlight, and the rows and rows of shocks give promise of food for the hungry people of the earth (Fig. 315, page 206).

Wheat was one of the earliest foods known. We read of wheat growing in the rich valleys in the old, old days. The people of Babylon in the Mesopotamian Valley used wheat and barley as money, and Joseph saved the people of Egypt and his own family, too, when he cared for the wheat of Pharaoh's kingdom. In the Bible story of Ruth, we learn about the harvesting of wheat in the Holy Land thousands of years ago.

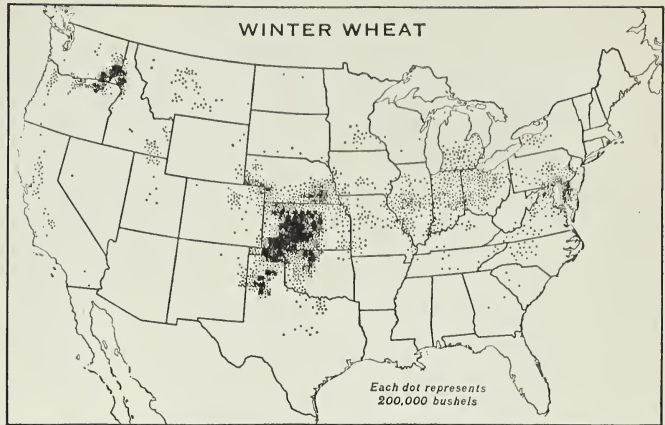


Fig. 304. Hogging-off a corn field

The Indians knew nothing of wheat, rye, barley, or oats until the white men brought them from Europe. None of these grains grew wild in America. Corn was the principal grain used for bread for a long time. It grew well among the stumps, and could easily be made into meal. As the country became more thickly settled and mills were improved, more and more wheat, rye, oats, and barley (small grains) were raised.

The Wheat Belt. The level fields of the North Central States made the growing of grain easy. From one-half to two-thirds of all the grain in the United States is raised in this region. Thus you can see why these states are sometimes given such names as the Corn and Small Grains Belt, and the Bread-basket of the United States.

The Wheat Belt is divided into two parts, the winter-wheat and the spring-wheat sections. Winter wheat is sown in the fall and harvested the next summer. Spring wheat is sown in the spring and harvested in the fall.

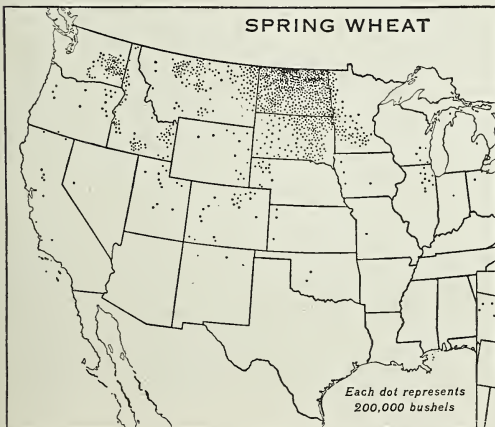


U. S. Department of Agriculture

Fig. 305. Can you name the states that are the heart of the winter-wheat region?

From a study of the wheat maps you will see that the winter wheat section reaches from Virginia to Kansas; the heart of it is just south of the Corn Belt. The spring wheat section is north of the Corn Belt and west of the Great Lakes, reaching far north into Canada. There is a wheat region in Washington and Oregon also, and another one in California, as you can see. Of course corn and wheat many times are grown on the same farm.

Winter wheat. Let us spend a winter with a winter-wheat farmer in Kansas so that we shall know how he does things. He tells us that those rich, level, treeless plains looked good to his father for growing wheat when he moved into that region seventy years ago; so he made the soil ready and planted the wheat seed. It began to grow splendidly; then came the hot, dry winds, and the wheat shriveled up. The seed wheat he was using had been brought from the East where there was more rainfall. On these dry plains it did not grow so well. But scattered over these great prairies were little settlements of Russians. Strange to say, their wheat did not shrivel up. Neither hot winds nor cold winds bothered it. People asked them what kind of wheat it was; all they could tell was that they and their fathers had brought it from Russia.



U. S. Department of Agriculture

Fig. 306. What is the great spring-wheat state?



Visual Education Service

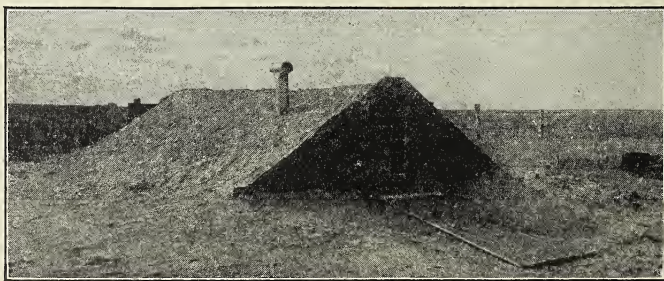
Fig. 307. The settlers of the prairie states had no trees with which to build log cabins; so they built homes like this from the tough prairie sod.

Then came Mark Carleton, the Wheat Dreamer. He dreamed of the day when his own state of Kansas and all the other states from Canada to Oklahoma would wave with fields of golden wheat. Somewhere in the world, said he, there must be a kind of wheat growing that will stand heat and cold and lack of water. He went to work for our government. From all over the world he had samples of wheat sent to him. He planted them to see how they would grow. Finally he went to Russia, whose great plains are so much like those of our wheat states. Over these plains he searched, among Russian peasants and half-wild tribes of Tartars. Finally he found the wheat he wanted, a sturdy plant that would stand heat and cold, and that gave a much harder kernel than any that had been grown here. Soon, millions of bushels of this wheat were being raised. But for some time the millers did not have the right kind of mill for grinding a hard wheat. The farmer's wife even had to learn how to make bread from the new flour. Then our farmer had other troubles. Grasshoppers came in such great swarms that they ate whole fields of wheat in a single day. Without railroads he had trouble in getting his good crops to market. Many of his neighbors became discouraged and moved away, but

our farmer kept on trying. He raised other crops and cattle to help out when the wheat crop failed. Then the railroad came. When the crops were good, he made money.

The Kansas farmer begins his plowing in July and keeps on plowing through August, or until all of his wheat fields are plowed. He sows the seed in September and October.

The first Kansas farmers sowed the seed by hand. Now this is done with a tractor- or horse-drawn planter which drops the seed in rows about six inches apart. With a little rain, the seeds soon sprout, and the fields are green by the time cold weather comes. When snow falls, it spreads a snug blanket over the young plants and keeps the roots from freezing. After the snow melts in the spring, the wheat grows rapidly. The farmers in this region have one great fear—the hot winds. If these hot, dry winds come when the grain is forming, it shrivels up and the crop is cut short or entirely ruined. On the other hand, if there is too much rain, the straw grows too large and there is less grain. The wheat is ready to be harvested from the middle of June to about the tenth of July. The harvesting must be done before the wheat becomes so ripe that the grains shake off when the stalks are cut.



Visual Education Service

Fig. 308. Sometimes the settlers made dug-outs like this. They were cool in summer and warm in winter. Notice how the treeless prairie stretches away in the distance.

John Deere and the plow. John Deere was one of those Yankees who liked to tinker and find easier ways to do things. He was a Vermont boy who had learned the blacksmith trade. In 1837 he moved to Illinois, along with many other Yankees who were trying to find a place where there were not so many stones. Here John was kept busy making and repairing plows for the farmers. The plows of that day were made of wood with an iron plate on the outside, and the settlers soon found that these plows were not strong enough to plow the tough grass sod and the heavy soil of the prairies.

So John Deere thought he would see if he could make a plow that would be strong enough. He got an old saw from the sawmill near by and set to work. Before long he had a plow with an iron share, the part that runs under ground. This was the first one of the kind ever made. Every farmer wanted one, and his business grew until he had to build a factory. The first steel sheets ever made for plows were made in Pittsburgh for John Deere. Until lately, plows were drawn by horses or oxen. Now many farmers have gasoline tractors that pull from three to ten plows at a time (Fig. 309). These tractors do the work of many horses.

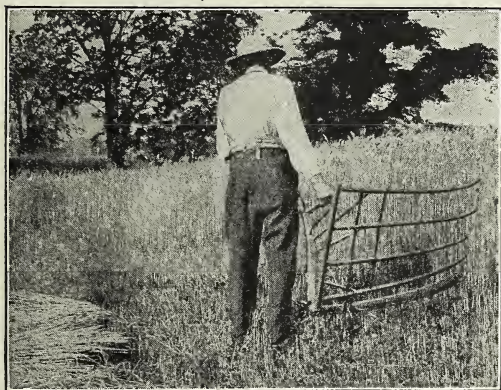


Courtesy International Harvester

Fig. 309. This tractor is pulling three plows.

Cyrus Hall McCormick and the reaper. In the early days of the colonies grain was cut with a hand sickle just as it had been cut in the Old World for hundreds of years. Then the scythe and the cradle were invented (Fig. 310), and the cutting of grain was made much easier. However, it still had to be done by hand, and even a small field took many days of hard work.

One day in 1831 Cyrus Hall McCormick, a young man in the Shenandoah Valley, surprised every one by riding into a wheat field on a queer-looking machine. Never before had anyone seen such a thing. The fence around the field was lined with men and boys. They were wondering just what Cyrus McCormick thought he could do with such a machine. Cyrus, of course, thought he had invented a machine that would cut grain. The onlookers were laughing at the idea of making a machine that would do all that work. "That young fellow must be crazy," they said. But—the knives clicked; the grain fell and lay in heaps on the ground. The queer-looking machine kept right on going, and in a few hours the whole six-acre field of grain was cut. Everyone was amazed. Men



Courtesy International Harvester

Fig. 310. The wheat, as it was cut, fell onto the cradle and was thrown off to one side. Cutting two acres was a good day's work. Now look at Fig. 312.



Courtesy International Harvester

Fig. 311. In a field near Lexington, Virginia, young Cyrus McCormick proved that his machine would work. The farmer was at first afraid it would ruin his wheat.

crowded around the machine to see how it was made. News of the invention spread all over the country. Farmers, especially those to the west of the mountains, wanted the new reaper. McCormick began to make reapers in earnest. He moved to Fairmont, West Virginia, then to Cincinnati, and then to Chicago. He added a binder to his reaper, something that would tie the grain in bundles and save all the back-breaking work of the old way of doing it. The first binder tied the bundles with wire, but the wire kept getting into the threshing machine and causing trouble. Then William Appleby found a way to use twine.

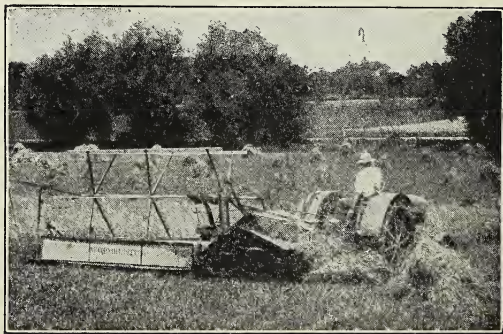
The reaper throws the bundles off to one side, and they are then put up in shocks, as you see in Fig. 312, so that the grain will become dry enough for threshing. Nowadays on large wheat ranches heading machines are sometimes used. These cut only the heads, which are poured into a wagon that is driven alongside the header. Then the heads are stacked to dry for threshing.

Threshing. In the old days the grain was bound in sheaves, or bundles, and stored in the barn when dry. Then in the winter the grain was threshed on the barn floor with a flail. The flail was a two-foot stick fastened to a four-foot handle with a strong leather thong, or string. With it the grain was

pounded until the wheat grains were free. Today this is done by threshing machines. Some farmers have their own machines, but usually the threshing is done by a man who follows this as a business. The thresher brings his own crew with his own engine and water-wagon, and the outfit will thresh as much as 2000 bushels a day. The thresher charges a certain price per bushel for the work. The latest harvesting machine made is a combined header and thresher. This machine, as it is pulled along by a

tractor, cuts the wheat, threshes out the grain, and pours it into a wagon that is driven alongside.

The wheat is either put in bins in the barn or is hauled to town and stored in big store-houses called elevators (Fig. 316). The farmer reads the daily paper carefully to find just what the wheat crop is in Canada, Europe, Australia, and South America. You see, he knows that the price of wheat is fixed by the amount of it in the world. When he thinks the price is as high as he can get, he sells. The wheat is then carried away by the carload and trainload over the Union Pacific, the Santa Fe, the Rock Island, and other railroads, to the big markets: Kansas City, Omaha, Oklahoma City, St. Louis, and



Courtesy International Harvester

Fig. 312. A wheat binder drawn by a tractor. This machine will cut and bundle from 20 to 30 acres a day.



Visual Education Service

Fig. 313. Threshing wheat. The wheat flows into the wagon while the straw is blown onto the pile. An engine off to one side runs the thresher. But "combines" are being used more and more.

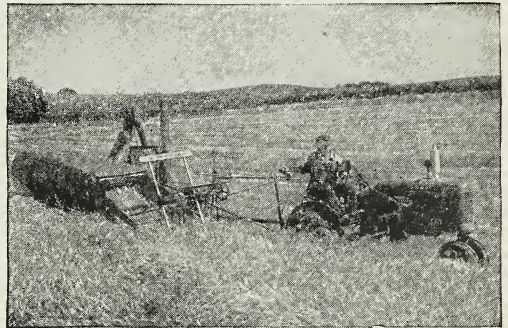
Chicago. Turn to the railroad map (page 374) and choose a railroad to take us from Chicago to the spring-wheat region.

The spring-wheat region. As we travel northwest from Chicago toward the spring-wheat region, we pass through the rolling country of Wisconsin and Minnesota where fine dairy cows graze in wide green pastures. Nearly every farm has its fields of oats, rye, corn, hay, and potatoes that help to fill the big barns and silos near each snug farmhouse. And each little town has its creamery where the milk from the dairies is bottled or made into butter and cheese. We see Minneapolis in the distance, with its towering elevators everywhere. The elevators in the small towns seem like midgets compared with these monsters in Minneapolis. The elevator in the wheat-country town will hold a few thousand bushels; these big ones will hold a million bushels or so. They look like giant cement pipes standing on end. (See Fig. 317, page 207.) We know we have reached the wheat region. As we pass through St. Paul and Minneapolis, we see many mammoth flour mills. We must visit them and see how flour is made; but not until we return from the wheat fields.

We change either to the Northern Pacific or the Great Northern railroad at Minneapolis. These roads will take us on our way to the spring-wheat region. At first we continue to pass through the dairy and mixed-farming section. Then the country begins to get more and more level; we are coming to the famous

Red River Valley—the valley of the Red River of the North. We see wheat, wheat, wheat; almost nothing but wheat, it seems. Great fields of it stretch away on both sides, as far as the eye can see. We are ready to believe that this valley is one big wheat field, as we have heard. Not quite all wheat, either, for here and there we see a field of rye, barley, or flax. Then we remember that two thirds of the rye and barley, and nearly all of the flax of the United States are grown in this section. You have already learned that linen is made from the flax plant. But most of this flax is grown for its seed. From the flaxseed is made linseed oil, which we use in making paint and varnish.

Now, as we reach the valley of the Red River of the North, we see a country so level that the water from a light shower stands in sheets over the land. There is hardly a knoll,



Courtesy International Harvester

Fig. 314. This machine both cuts and threshes the wheat. The wheat pours out of the pipe at the right into a wagon that is driven along beside the thresher.



© Schlecten, from Ewing Galloway

Fig. 315. A great wheat field in Montana ready for the threshing machine. As you travel westward from the flat Red River Valley, the country becomes more and more hilly.

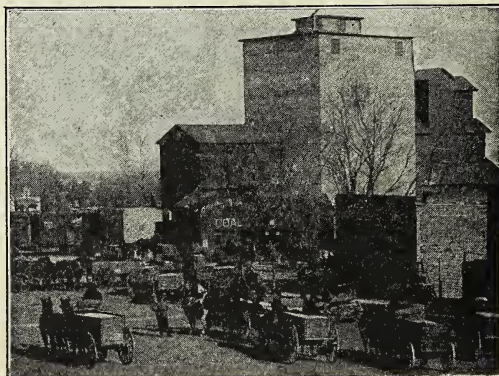
a stump, or a rock in sight. Here and there a farmhouse with barns and trees around it breaks the view; then again miles and miles of wheat fields, green in the spring and golden yellow in the summer.

When you learned how the Great Lakes were made, you read about the great ice sheet that covered so much of North America thousands and thousands of years ago. Before the ice sheet came, this valley was a great lake. Then the ice sheet covered it for a long time. When the ice melted, the lake was filled with a soft, thick mud. The water finally drained off and left this plain with some of the finest, richest soil ever seen. This valley and the country far to the west toward the Rocky Mountains and north into Canada is the spring-wheat region. It extends as far to the north as the summers are long enough for the grain to ripen.

Here in the spring-wheat region the fields are plowed in the fall, the same as they are in Kansas. But the wheat is sowed in the spring. Winter wheat would be frozen out here—the winters are so cold and so long. The weather seems to be just right for producing the finest crops of spring wheat. The spring thaws leave the ground soft and moist, so that it is easily worked. Most of the rain comes after the grain has been sown, just when moisture is needed to sprout it. In the late summer

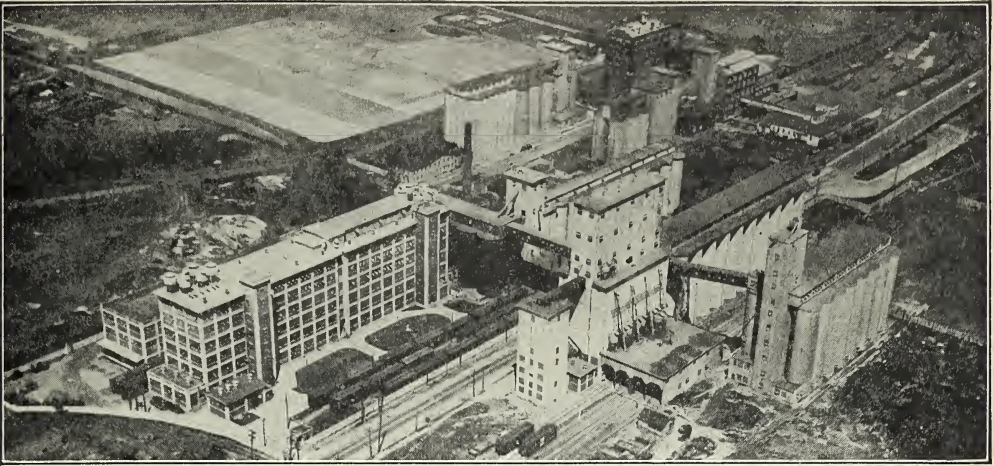
when the grain is ripening for the harvest, very little rain falls.

As soon as the harvest is over, countless wagons and trucks haul the golden grain to the elevators at the railroads (Fig. 316). Thousands of carloads are taken to Duluth and Superior to be shipped on the lake steamers. The millions of bushels that cannot be shipped in the fall will be stored in the giant elevators and shipped in the spring. These storehouses are called elevators because the wheat is carried up and dumped in from the top. Buckets on a moving belt carry the wheat up. A very large part of the wheat grown in this region is shipped to Minneapolis for the flour mills there.



U. S. Department of Agriculture

Fig. 316. Bringing wheat to the town elevator



By Ewing Galloway, N. Y.

Fig. 317. This great flour mill is in Kansas City, Kansas. Can you see the big concrete elevators in which the wheat is kept? Now look at the "flour mill" in Figure 318.

FLOUR-MAKING

The story of flour-making. In Bible days grain was ground into flour in a hand mill. That kind of mill can be found in many places in Asia today (Fig. 318). One heavy flat stone with a spindle, or iron rod, sticking up from the center was laid on the ground. A hole was made in a second stone to fit over the spindle in the first stone. Then the second stone was laid on the first one. A handle was fitted into the upper stone so that it could be turned around on the lower one. The grain was then dropped into the hole around the

spindle. As the upper wheel turned, the grain was ground between the stones. It was then sifted to separate the flour from the hulls, or bran.

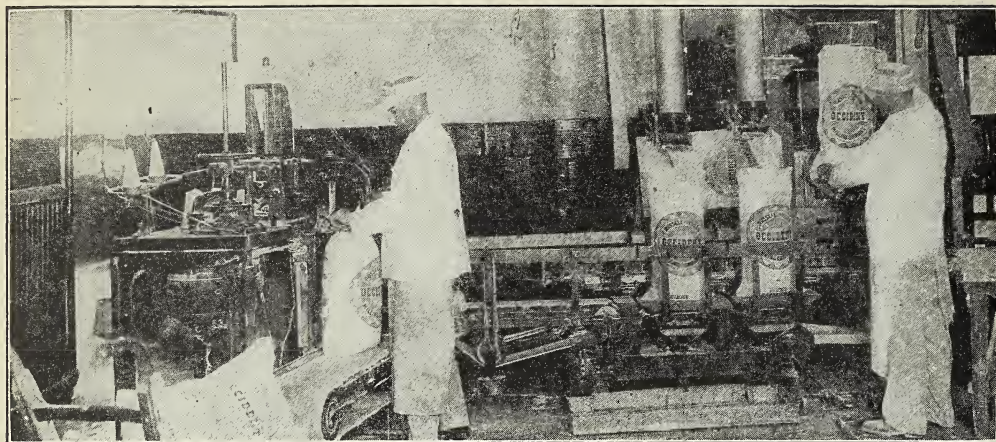
Our great-great-grandfathers used a method which was better than this old way of grinding grain; at least it was an easier way. They put the streams to work, using water power. They set a creaking old water-wheel in the stream. The running water turned the wheel, which turned the stones that ground the grain into flour. When the flour ran low in the barrel at home, one of the boys slung a sack of rye or wheat across old Dobbin's back and rode off to the grist mill with it. There the miller poured the grain into a big hopper from which it ran slowly through the hole around the spindle and was ground between the two heavy millstones. The flour was then bolted, or sifted, through a fine cloth. This flour was a little finer and a little lighter in color than that made in the old hand-mill. The miller took out about four quarts from each bushel as toll, his pay for grinding it.

Flour-making today. About fifty years ago the roller mill was invented, and the other machinery was improved. The grain is first run through machines that take out the



© Keystone View Co.

Fig. 318. Grinding flour by hand in the Holy Land



© Keystone View Co.

Fig. 319. Sacking flour in a Minneapolis flour mill. Perhaps you ate bread made from some of the flour in one of these sacks. Almost one fifth of the food we eat is made from wheat.

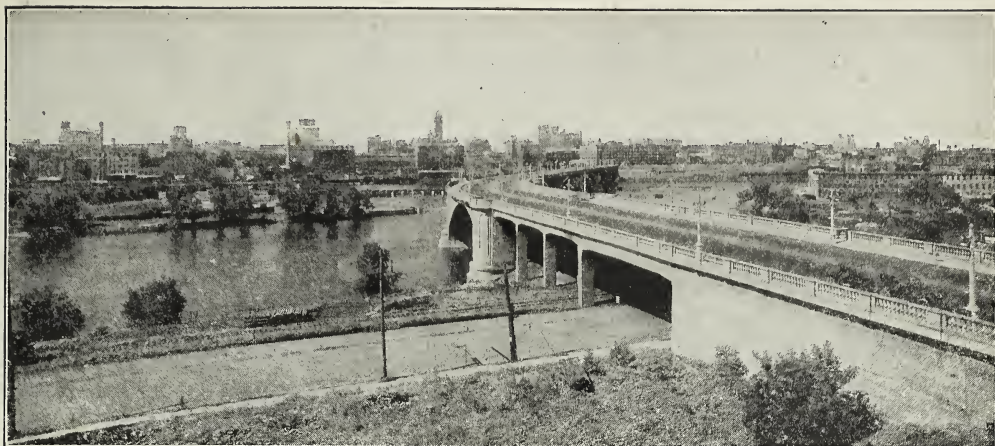
dust, dirt, weed seeds, and the poorly developed grains. It is then run between several sets of rollers that crack it finer and finer. Somewhere along the way the bran, or hull, is taken out, and also the middlings. These are the coarser parts of the wheat. What is left goes through machines that separate it into different grades of flour. All machines are closed to keep out dust and dirt. The workers do not touch the grain at all. For years flour was put up in barrels. Now most of it is put up in sacks of different sizes—from two to ninety-eight pounds. Machines weigh the flour, pour it into the sacks, and sew them up. The bran and middlings are shipped to the dairy sections, where they are used as feed for the cattle.

Minneapolis, the flour city. Minneapolis is the greatest flour-milling city in the world (Fig. 320). In the early days sawmills were built there because the water power from St. Anthony's Falls could be used. As the land was cleared of the forests and wheat was raised where trees once stood, the sawmills disappeared. Flour mills were built in their place. The flour mills of today use the same water power that the sawmills used, the Falls of St. Anthony. However, there is not

enough water power to run all the mills; there are too many of them. Steam and electricity now run the machinery. The largest mills produce as much as 20,000 barrels of flour in a single day, and all of the mills together produce about fifteen million barrels in a year. A barrel is about 200 pounds. Buffalo, St. Louis, Kansas City, Chicago, Milwaukee, Indianapolis, and Duluth are other flour-milling cities.

Besides making flour Minneapolis has mills for making breakfast foods from corn, barley, wheat, and oats. Other mills crush and press flaxseed to make linseed oil used in paints; still other mills make cloth or paper sacks. The paper is made of wood pulp which comes from the forests to the north. These same forests furnish timber for making barrels and the farm machinery needed in the surrounding country. The boats that run on the Mississippi cannot go any farther north than Minneapolis. Minneapolis grew there as the cities of our Atlantic coast states grew on the Fall Line.

St. Paul. Across the river from Minneapolis is St. Paul, the capital of Minnesota. The two cities are called the Twin Cities, and they are so close together they seem almost



Courtesy Chicago and North Western Railway

Fig. 320. Here at the Falls of St. Anthony in the Mississippi have grown up the great cities of St. Paul and Minneapolis. Father Hennepin, one of La Salle's company, discovered and named these falls.

like one city. St. Paul is the lumber market for this region. It is also a center for trade between the East and the West. There are many shoe, harness, refrigerator, and farm-tool factories in the city. These two great cities are sometimes called the Gateway to the Northwest.

QUESTIONS TO ANSWER

1. What is meant by mixed farming? Why is it a wise plan? 2. Why did the first farmers think the prairies were not good for farming? 3. Was most of this region prairie or woodland? Where were the prairies? 4. Explain why the first settlers used corn for bread instead of wheat. 5. What kind of weather must corn have to grow well? 6. How is the green corn saved for the dairy cattle to eat in the winter? Locate the Corn Belt by states. 7. Locate the cities that are markets for the corn. 8. Can you tell why the Corn Belt is also the Hog Belt? 9. What is the value of the corn and pig clubs besides keeping the boys busy? 10. Tell the story of John Deere. Just why was there special need for the kind of plow he made?

11. Which of the grains did the white man bring with him from Europe? 12. Explain the difference between winter and spring wheat. Locate the winter-wheat belt by states. Locate the spring-wheat region. 13. Tell the class how wheat is grown. Why is the winter wheat not frozen out?

14. What machines have helped the growing of wheat? Write or tell the story of Cyrus McCormick. 15. Locate the cities that are the principal wheat markets. 16. How was the Red River Valley made into such a fine spring-wheat region? What other grains are raised there?

17. Give two reasons why Minneapolis grew to be such a flour-making city. What railroads bring the wheat to the city and take the flour away? 18. What improvements have been made in flour-making machinery since the time of Miles Standish? 19. Name other flour-making cities. 20. Tell the story of Mark Carleton, the Wheat Dreamer.

THINGS TO DO

1. On an outline map of the Central States draw pictures of corn and hogs to show where they are raised. On the same map draw pictures of shocks of wheat to show where the most wheat is raised. Label the two kinds of wheat. Be sure to put in the names of the states. Show the main railroads and the big cities.

2. Make a list of all the breakfast foods you can, what they are made of, and where they are made. 3. Write a story on "How Machines Help the Farmer." From magazines and catalogues cut pictures of farm machines to go with your story.

4. Ask your mother to help you bake some corn bread, or Johnny cake. 5. Find what makes brown bread brown and white bread white. Be ready to report to the class.



Courtesy Chicago, Burlington and Quincy Railroad

Fig. 321. For thousands of years animals have been helping man do his work and providing him with food and clothing.

HOW THE ANIMALS HELP US

Man's animal friends. The cow, the hog, sheep, the goat, fowls, the horse, and the dog have been man's friends and companions for many hundreds of years. We read of cattle, sheep, and goats in all the stories of the old, old times. When Abraham moved from Ur of Chaldea to Canaan thousands of years ago, he took his flocks of sheep and other live stock with him. The shepherds were watching their flocks the night they saw the Star of Bethlehem shining in the sky. The soldiers of Rome were warned of the coming of the enemy by the cackling of geese. Bread, milk, and meat are our principal foods. Man has eaten meat for thousands of years. At first he ate it raw. When he learned to make fire, he found that his meat tasted better when it was cooked.

THE COW

Where the cow got its pet name. When the farmer calls the old cow "Bossy," we may think he is calling her a pet name to get her to come to him or to stand still while he milks her; but that is her real name. She belongs

to the Bos family of the animal kingdom. The water buffalo in the swamps of the Philippines, the yak in the mountains of Thibet, and the bison which the Indians killed for meat, are all Bossy's cousins. The water buffalo and the yak are used as work animals. But Old Bossy gives us meat and milk. We have learned to raise better cattle, so that we get more milk and meat from them than our grandparents did.

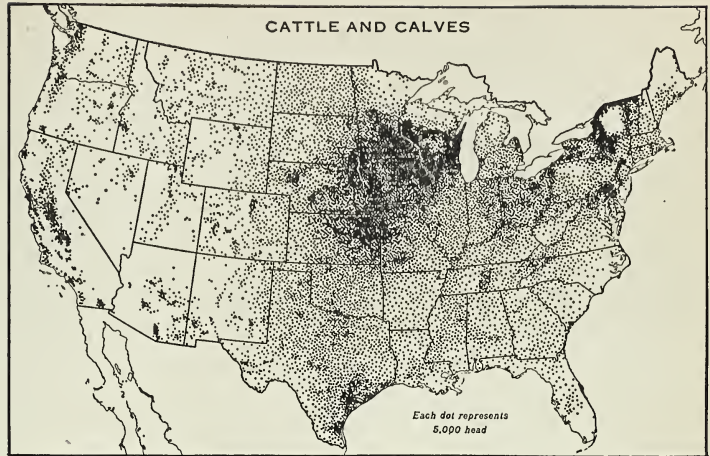
The settlers and their cattle. The English and Dutch settlers brought cattle to America with them. They did not think of having two kinds of cows, one for milk and another for beef, as we do now. To them cattle were just cattle, animals to help do the work and furnish food for the family. During the summer the cows furnished milk, and in the fall one of them was killed for beef. Each family made its own butter and cheese and killed its own beef. They did not have any to sell, but might spare a little to a neighbor as a favor. As cities grew, the farmers near them kept a few extra cows, and delivered milk and butter to the city people.

Their wives might make a little more cheese than the family could eat, and sell it in town. That is how dairying started.

When butchering time came in the fall, the farmer sold one or two of the hogs and part of a beef in town. The city people began to want fresh meat in the summer; so one man would make a business of buying cattle and hogs from the farmers, killing them at his shop, and selling the fresh meat to the people. That was the beginning of the butcher shop, or meat market. Since there were no refrigerators and no ice in the summer-time in those days, all meats and milk had to be sold fresh.

Beginning of cattle-raising in the West. When our great-great-grandfathers moved farther west, they drove their cattle with them. On the rich soil of the Central States, they could raise more and better cattle than they could on the farms they had left. It was not long until they were driving herds of beef cattle to the eastern cities. Cattle-raising for meat soon became a real business, and cattle were driven east from places as far west as the Mississippi River.

About the time the railroads came, the cattle raisers moved to the plains west of the Mississippi, and the cattle were driven to Chicago, the stock market of the country. From there the railroads carried them to the East. But shipping live cattle to the East did not work very well. Many of them were in poor condition when they reached the market, and some died on the way. So the cattle were killed in Cincinnati or Chicago, and the meat was salted or smoked to keep it from spoiling. But the people wanted fresh meat rather than the salted or smoked



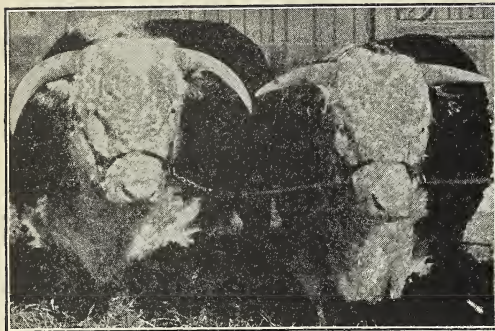
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Fig. 322. In what states are the most cattle raised? Look again at the corn, hog, and wheat maps. Do you see why these are the great "food states"?

meat; so to keep the meat fresh the packers began to use ice in the cars. In this way fresh meat could be shipped long distances.

Growing better beef cattle. The cattle grown then were not of a very high grade, and shipping poor, skinny cattle did not pay; so cattle raisers began to look around for better cattle for beef. In England there were certain kinds, or breeds, of cattle that would grow to be three or four times as heavy as the cattle here. Some of these were brought to America, and our cattle raisers began to grow larger and finer beef cattle. Three breeds, the Shorthorns, the Herefords, and the Aberdeen-Angus, have been improved until now one steer can provide nearly 1000 pounds of meat.

As you look at the cattle map, do you wonder why there are more cattle in the corn belt than anywhere else? It is because beef cattle are not fattened where they are grown. They are shipped from the cow country of the western plains to the Corn Belt, where they are fattened for market. During the summer the farmer of the Corn Belt may not have many cattle and hogs. In the fall he buys several head of cattle and hogs and feeds them on the corn he raised during the



Wesley Bowman Studio

Fig. 323. Prize white-faced Hereford beef cattle

summer. By spring they are fat. The farmer sells them and makes a good profit on his corn. Of late years the corn-belt farmers have been buying young stock, one year to one and one-half years old, from the cattle raisers. These young cattle pay better than the older ones, because they fatten quickly and can soon be put on the market. They make what the butchers call "baby" beef.

DAIRYING

Improving milk cows. When the dairy farmer found that he needed cows that would give more milk, he went back to Europe to find them. On the islands off the coast of France he found the Guernseys and



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Fig. 325. A cow-club member with his Jerseys



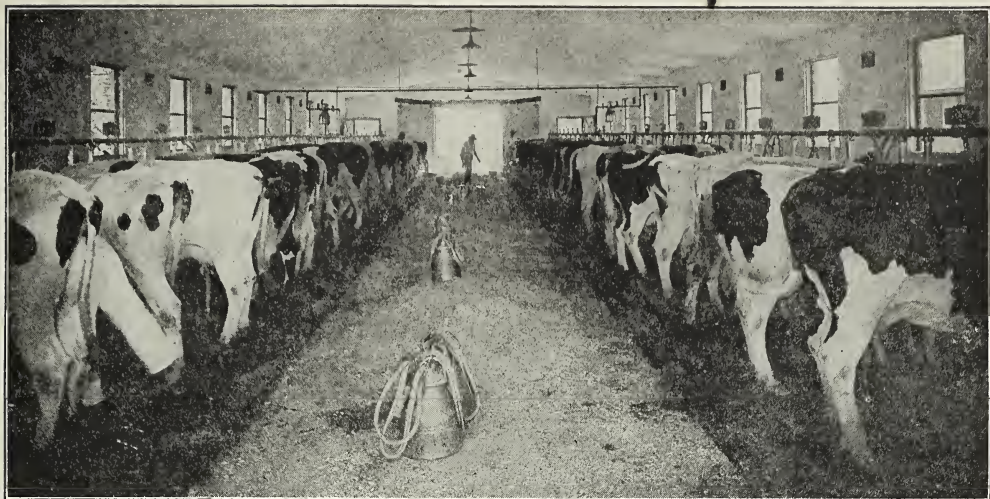
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Fig. 324. Dutch Belted dairy cows

the Jerseys. These cows give very rich milk, and the butter made from it is golden yellow. The Holstein-Frisian and the Dutch Belted cattle from Holland give great quantities of milk, but it is not so rich. The Brown Swiss cattle of Switzerland give the best milk for cheese, and the Ayrshire cows are best for hilly farms. These breeds, except the Jersey, give as much as twenty quarts of milk a day for ten months in the year. The cows our great-grandfathers owned gave perhaps four quarts a day for five months in the year.

Dairy cows like soft, green grass that has grown quickly. Look at the cow's mouth sometime, and you will see that she has only one set of front teeth; so she cannot chew tough grass very easily. She must also have plenty of good pure water from a spring or good well. If she drinks stale water, she will not give pure milk.

Milking. On small farms the milking is done by hand. On most large farms today the milking is done with electric or gasoline milking machines. As many as thirty or forty cows are milked at a time, and the milk flows into closed pails. It is then taken to another room and put into ten-gallon cans, which are lowered into a vat of iced water to cool the milk. Each morning the milk is hauled to the creamery, where it is pasteurized by heating it. This will kill any germs that may have gotten into it.



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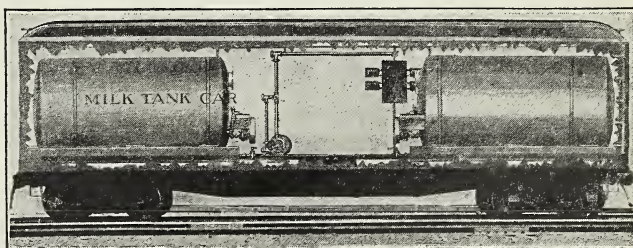
Fig. 326. Holstein cows in an up-to-date dairy barn. In the center of the picture are the milking machines.

The cow barns in the big dairy sections are almost as comfortable as many of the houses. The stables are whitewashed often and are cleaned out twice every day. The cows are brushed every day, and their udders are washed before each milking. They are fed just the right kind and amount of feed, or the creamery will not take the milk. The milk from each cow is measured and tested often so that the dairyman can be sure the cow is earning her board. If she does not give enough milk, or if it is not as rich as it should be, she is sold.

Shipping the milk. After the milk is pasteurized at the creamery, it is cooled again, put into bottles, and loaded into iced cars to be shipped to the city. Sometimes it is pumped into great glass-lined tank cars and shipped that way (Fig. 327). The milk cars are either taken to the city by the fast passenger trains or in separate trainloads by fast locomotives. These, then, are called milk trains, and the train schedules are so planned that the milk reaches the city before daybreak

each morning. Bottling machines pour it into bottles, put on the stoppers, and it is brought to your door by breakfast time.

Churning for butter. In the old days, when the butter was all made on the farm by the farmer's wife, the milk was set in shallow pans in the dairy house so that the cream would rise. At the end of twenty-four hours the cream had risen to the top, and it was skimmed, or dipped, off the milk. Cream is lighter than milk; that is why it rises. Sometimes the cream was so thick that it could be turned over almost like a pancake. The cream was kept warm for a day or two, until it was soured just right for churning. It was then put into the churn.



Courtesy Pfaunder Co.

Fig. 327. How the inside of one kind of milk-tank car looks



Visual Education Service

Fig. 328. The old-fashioned churn

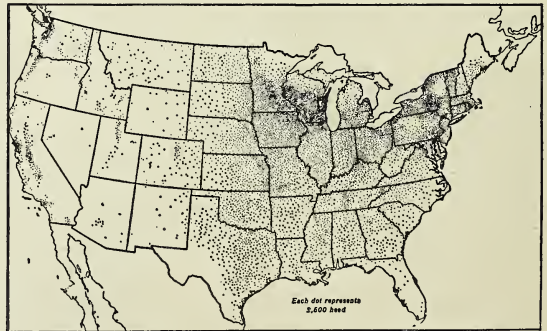
The churn, whether large or small, was shaped something like a barrel, with a hole in the center of the cover, or top, for the dasher (Fig. 328). The handle of the dasher, which looked like a broom handle with two short pieces nailed crosswise on the end, came through the hole in the top of the churn. The farmer or his wife, or one of the children, kept moving the dasher up and down until the butter was separated from the milk in small chunks. What was left was buttermilk. Did you ever drink any buttermilk? The butter was then put into a wooden bowl, washed with clear spring water, and pressed and squeezed and worked over to get all the buttermilk out of it. Salt was added, an ounce to the pound. The butter was then packed into a large wooden tub or in crocks and stored in the cellar until fall. Butter made this way was hard and sweet and had a fine flavor, but the making of it meant much work for the farmer's wife. As cities grew larger, more and more people had to buy their butter. Only by machines could enough be made.

Butter-making today. Nowadays some of the milk that is brought to the creameries is run through a machine called a separator, which draws off the cream, and leaves what is called skimmed milk. One hundred pounds of milk will

give about three or four pounds of cream. The cream is shipped to the towns and cities or is made into butter. The skimmed milk is made into different articles, such as cottage cheese, sugar for coating pills, and a kind of glue that gives the paper of this book a glossy surface.

When the cream is ready for churning, it is put into a huge, long box or barrel, which is turned round and round by an engine. These big churns will make from 500 to 2000 pounds of butter at one time. The butter is worked by a machine, washed, and salted, and put in pound packages as we buy it at the grocery. Some is still packed in wooden tubs or in tin buckets.

Cheese-making. When you smell a rich limburger cheese, see the green mould of a Roquefort cheese, and learn of the many other kinds of cheese in the stores, you think that cheese-making must be hard. But it is really quite simple. The milk is first put into a big vat and heated for a time, and slightly soured. Rennet, a juice from the stomach of a calf, is put in the milk to curdle it, that is, to separate the watery whey from the curd, or raw cheese. The whey is drawn off, and the curd pressed in the shape desired. It is then put into a room with a temperature of about fifty degrees. Here it is left to cure. Three



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Fig. 329. A dairy-cow map. Where there are big cities and many people, there must be many dairy farms; so this map shows pretty well the parts of our country that are most thickly settled.

months is time enough for some kinds of cheese to cure, while others require from two to three years. Cheese differs according to the milk used, the salting, the pressing, the things added, and the curing. There are at least 250 different kinds.

Look at the dairy map (Fig. 329), and you will see that the dairy region extends from New England across the Central and Great Lakes states and beyond the Mississippi River. New York is the leading milk and cream state, for it is nearest the largest cities. Minnesota and Iowa are butter states, and Wisconsin is the cheese state. Minneapolis is a great butter market, and Milwaukee is a market for cheese.

POULTRY

Kinds of chickens. The ancestors of our chickens came from the wild red jungle fowls of India. The people of Europe brought chickens from Asia and improved the breeds. American poultrymen have improved them still more and have started other breeds. The best known kinds are the Brahma and Buff Cochin from Asia, the Leghorn and Minorca from Europe, the Orpington from England, and the Plymouth Rock, Wyandotte, and Rhode Island Red from America. The Leghorn is the best layer; one



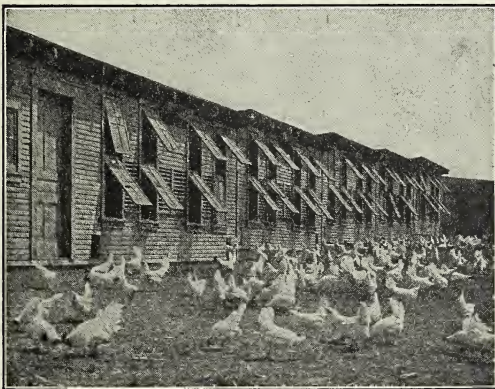
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Fig. 330. A chicken-club boy from Minnesota

Leghorn hen will lay as many as 300 eggs a year. The Brahma is raised for her meat. Others are good for both eggs and meat.

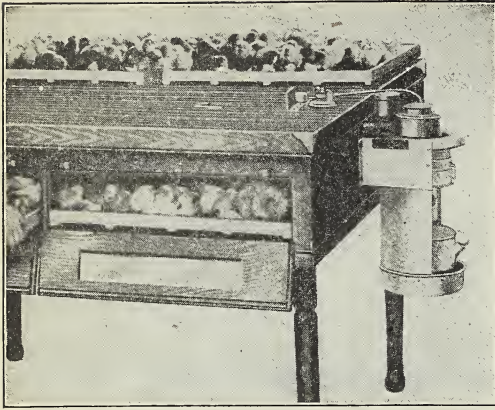
A billion-dollar hen crop. Years ago chickens were raised mostly for the use of the farmer's family. The farmer's wife cared for them and traded the eggs and chickens that the family did not need for the groceries that could not be raised on the farm, or she sold them for her pocket money. But poultry-raising has become a regular business, and now many farmers raise nothing else. Poultry is one of our principal farm crops. It is hard for us to believe that the American hen brings in a sum of money each year equal to the value of all the cattle, and greater than the value of all the wheat or all the fruit in the country; but she does. The hen crop is worth about a billion dollars a year. Half the chickens and eggs of the country come from the North Central states.

Most of the poultry farms are near the large cities so that the markets can easily be supplied with fresh eggs and freshly killed fowls. But by keeping them cold, eggs can be shipped long distances. Some of the largest egg-producing farms are in the Pacific



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Fig. 331. White Leghorn chickens and their houses



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Fig. 332. Baby chicks just hatched in the incubator

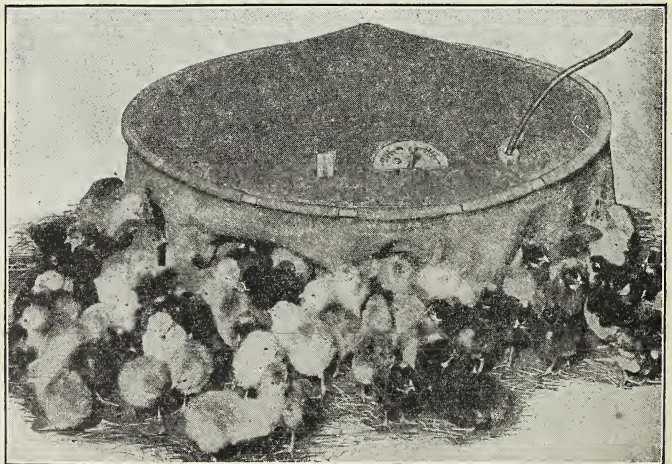
coast states. The Petaluma district just north of San Francisco, California, produced in one year more than fifty million dozens of eggs. More than 1400 carloads were shipped to the eastern cities.

Hatching chicks. The old way of raising chickens was for Biddy to hatch the eggs by sitting on twelve or fifteen of them for three weeks. She thus kept them warm so that the little chicks would begin to grow inside the shells. Now they are hatched in incubators heated by stoves or steam pipes (Fig. 332), and Biddy is kept busy laying more eggs for the incubator. Instead of fifteen eggs at a time, the incubator may hatch hundreds of them. One mammoth incubator in California hatches many thousands of eggs at one time. The baby chicks are sold to other poultrymen who do not have incubators. Twenty-five to one hundred chicks are put into a paper box lined with straw and with air holes in the lid and shipped by parcel post or express. Even though they are so little, most of them make the journey safely.

The turkey. The turkey was found wild in America when the white men came, and a few wild ones are still found in the South. The turkey got its name because people thought for a while it had come from Turkey, in Asia. There were no turkeys in the Old World, but some were soon taken back to Europe. Turkeys were common there by the time the Pilgrims came to America. About one-third of the turkeys for our Thanksgiving dinner come from farms in the North Central states. About two weeks before Thanksgiving, in the states from New England to Kansas and Texas, great flocks of turkeys are driven or shipped from the farms to the town markets where they are killed and dressed for the city markets. Geese and ducks for our Christmas dinner may come from the same farms.

HORSES AND MULES

First use of the horse. The first horses known were shaggy little animals that lived in the mountains of Asia, and their first use seems to have been to carry men. We read of the horses that were ridden by the warriors of Babylon and Persia and that drew their chariots thousands of years ago. Some



© Keystone View Co.

Fig. 333. In these warm little houses the baby chicks are kept.

of the most beautiful horses of today come from Arabia. It is said that the Arabian loves his horse almost more than he does his family. The people of Europe brought horses from Asia and improved them so that they were larger and stronger. The knights with their heavy armor needed big, strong horses. For many years they were used only for carrying men in war. Oxen still did the hauling and other farm work. Even today in Europe and Asia many oxen are used. What other animals carry man and haul his loads?

Fine saddle horses of the South. When the colonists came to America, they brought a few horses with them. These were used mostly for traveling. In the Southern colonies the owners of the plantations needed them to get about over their large estates, and Virginia became the home of the best saddle horses in the colonies. Horse racing was the favorite sport of the Virginia gentlemen. You remember that northern Virginia and the Shenandoah Valley are still noted for their fine horses. When the Virginians moved to the Blue Grass country, they took their fine horses with them, and ever since then the Blue Grass region of Kentucky has been the home of the finest race horses ever produced in this country.

Heavy farm horses. The Quaker and Dutch settlers of Pennsylvania were not sportsmen, and their farms were not so large. They needed strong, heavy horses for hard work. These large Pennsylvania horses were the ones that hauled the Conestoga wagons over the mountains to Pittsburgh and the West. The farmers on the large farms of the Central States needed still heavier horses for their work; so they went to Europe and



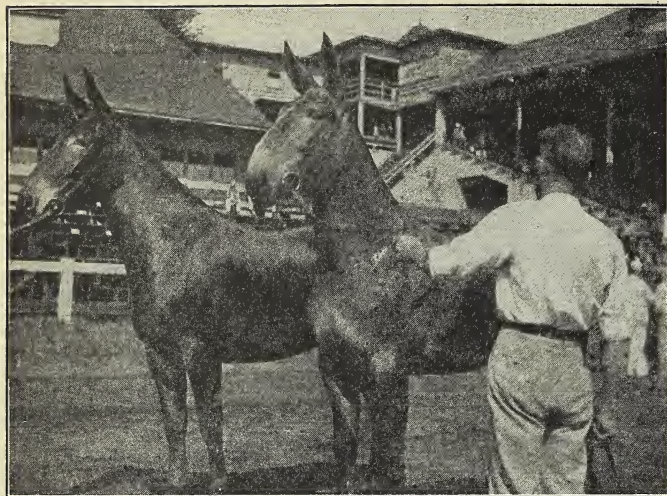
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Fig. 334. These fine horses can pull heavy loads. The dark-colored horse is a Belgian; the gray is a Percheron.

brought the Percheron from France, the Clydesdale from England, and the Belgian from Belgium. Some of these horses weigh as much as a ton each and can pull very heavy loads (Fig. 334).

But Iowa, Illinois, and the other corn-belt states raise the most horses. Here they are needed on the farms, and there is plenty of hay and corn for feed. About half the horses in the country are raised in the North Central states. Gasoline tractors are taking the place of Old Dobbin on the farm, and the automobile is pushing him from the streets of the city and the highways of the country. Yet there still remain about ten million horses in the United States. They are used on farms too small to make a tractor worth while, for hauling trucks in cities, and in places where the tractor cannot be used.

Mules. The mule is half horse and half donkey. It too has been helping man for hundreds of years all over the world. This animal is not only tougher than the horse, but it can also be kept on less feed. The mule does not get sick so easily as a horse, is



Courtesy The Progressive Farmer

Fig. 335. A team of fine mules at a Tennessee stock show

more patient, and can stand heat, cold, and rain better. While many mules are used on the farms of the North Central states, especially in Missouri, more of them are used on the cotton and sugar plantations of the Southern states. What state about which you have studied is especially famous for the fine mules raised there?

QUESTIONS TO ANSWER

1. What are man's three principal foods? How do we know that man had these foods long ago? What foods did the Indians know nothing about before the white man came? Which ones did the Indian give to the white man? 2. Explain how the milkman's business developed. There was no milkman in Jamestown or Plymouth. Ask some other member of the class to tell how meat markets or butcher shops started.

3. Why did cattle-raising become a real business in the North Central states? In what two ways that you know were cattle taken to the eastern cities? 4. What is meant by meat-packing? Why was it started in the West? In what cities did it start? Name some kinds of meat from the cow.

5. What have you learned is the difference between beef cattle and dairy cattle? Can you name any breeds of each? 6. Tell how milk is handled so

that we know it is pure when we get it. 7. Name the states that lead in producing butter. The one that leads in cheese. 8. Name some of the breeds of hens that furnish us eggs and fried chicken. How important is the hen crop. Where do you expect to find most of the poultry farms? Locate them on the map. 9. What other poultry do we enjoy besides the hen and the turkey?

10. Why do we study about the horse and the mule when the automobile is used so much? 11. Where was the first home of horses? Where in this country were fine horses first raised? Can you name the best horses for pulling heavy loads? 12. How are mules different from horses?

Where are they most used in our country?

THINGS TO DO

1. Meat that we buy has different names according to the part of the animal from which it came. Find at home the names of the different "cuts" of meat. Make a list of these "cuts." First write the name of the animal, and under it write the name of the cut. Tell also from what part of the animal the "cut" comes. 2. Find what the different kinds of meat cost per pound and put the costs on your list. 3. Find the reasons for cooking meats and make a report to the class.

4. Write the story of making butter. 5. Try to find a picture of a yak and water buffalo. Draw them. 6. Find how many different kinds of animals are used to carry or haul things, and the countries where they are used. Be ready to make a report to the class. 7. Make a scrapbook of pictures of animals that help man.

Books to read: Allen, *Geographical and Industrial Studies—United States*, pp. 111-137, 241-246; Carpenter, *New Geographical Reader—North America*, pp. 224-242; Carpenter, *The Foods We Eat*, pp. 1-16, 27-70; Chase and Clow, *Stories of Industry—Vol. II*, pp. 115-143, 190-202; Lefferts, *Our Own United States*, pp. 189-194, 210-216; Pitkin and Hughes, *Seeing America—Farm and Field*, pp. 49-75, 258-285.



Wesley Bowman Studio

Fig. 336. A loading platform in one of Chicago's many freight yards. Every day thousands of boxes, barrels, and crates filled with goods manufactured in Chicago are loaded into cars and shipped away.

MANUFACTURING IN THE NORTH CENTRAL STATES

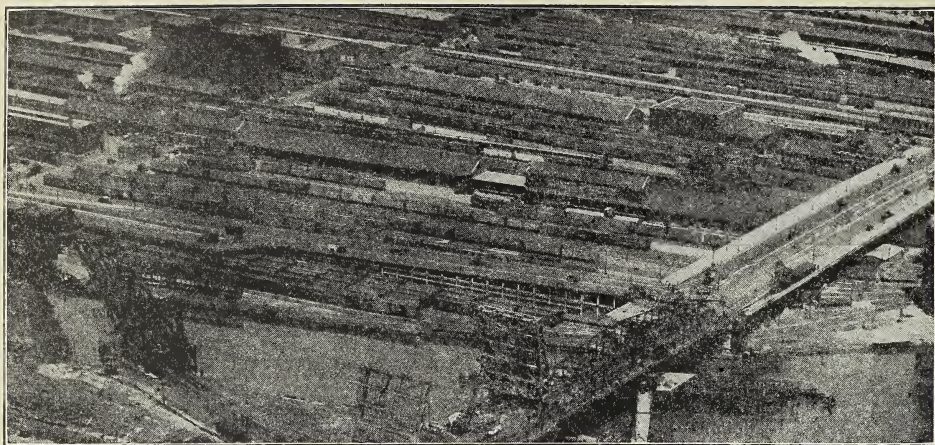
CHICAGO, THE YOUNG GIANT

Because this North Central states region is such a fine farming section, the farmers must have wagons and trucks to haul their produce away; the farmers' wives must have furniture, dishes, and other articles for the house; the families must have clothes; roads must be paved and freight cars built to carry the farm products to market and bring other goods back. All these articles, then, must either be manufactured in the cities in these states or shipped in from other states. Most of them are made in the home cities of the North Central states. Let us see why these cities make so many things.

Raw materials near by. The machines and tools we saw in Mr. Wood's shed were nearly all made in cities in this region, probably in Illinois. That state manufactures more than half the farm machinery of the United States. Chicago is the leading city in the world for making such farm machinery.

These factories must have raw materials for making their goods: iron, copper, lead, zinc, lumber, coal; and there must be cement for buildings and for paving the roads. You will soon see that all or most of these materials are close at hand; very little must be shipped from other sections.

Find a map which has Chicago near its center. Now cut a string that will measure five hundred miles according to the scale of miles on the map. With the tip of your finger hold one end of the string on the point where Chicago is located. With a pencil at the other end draw a circle. The greatest iron-ore mines in the world lie inside this circle. Lead and zinc are found on the southwestern edge in the region around Joplin, Missouri. Perhaps northern Michigan will supply us with enough copper. The coal map tells us that we have coal enough to run the iron and steel furnaces. We know that in Kentucky and Tennessee there is plenty of limestone



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Fig. 337. One of Chicago's many freight yards. About 15,000 freight-cars come into, and go out of, Chicago every day. Near the bottom of the picture is the Chicago River.

for use in the iron and steel furnaces and in making cement; and the other states have enough to help if necessary. There is enough clay to make most of the brick we need. The Lake states and Kentucky will supply our lumber. We find enough petroleum inside this circle to produce much of the gasoline we need, and there is more just outside.

Study the maps, and locate the different materials the cities need for their factories. Now locate Chicago on an outline map and draw a circle as you have just done on the other map. Then with a red pencil locate the different minerals mentioned by writing the name neatly in the proper place. You may need to write some of the names in two or three places. Now with a blue pencil locate the farm products in the same way: corn, wheat, butter, cheese, etc. You cannot fail to see that this region is truly rich in what the ground gives forth, in what is above the ground, and in what is under it.

A great railroad center. Now let's see if we can learn why we used Chicago as the center of the circle. Turn to the map on page 374 and make a list of the railroads you find running out of Chicago. Suppose you trace some of the largest railroads on the outline

map in this way: Locate the city of Rock Island, from which the Rock Island Railroad took its name. Place a dot for the city. Draw a line from Chicago to Rock Island and extend the line to Omaha and Denver; then label this line Rock Island. Locate Cairo with a dot and trace a railroad from Chicago through Cairo to New Orleans. This is the Illinois Central Railroad, so called because it runs through the central part of Illinois. Label it. Do your work neatly and carefully, or there will not be room for all you must write on the map.

Now draw in these other railroads: Chicago, Milwaukee, St. Paul and Pacific; Chicago and Northwestern; Chicago, Burlington and Quincy; Chicago, Indianapolis and Louisville; Atchison, Topeka and Santa Fe; Cleveland, Cincinnati, Chicago and St. Louis—called the Big Four; New York, Chicago and St. Louis—"Nickel Plate"; Baltimore and Ohio, Chesapeake and Ohio, New York Central, Michigan Central, Pere Marquette, Grand Trunk, Pennsylvania, Wabash, "Soo Line," and the Erie. You will have to get some railroad folders because the map in the book is too small to show all these lines.

Now what does the map show you about Chicago and the railroads? Do you think Chicago is really the center? How do you think the lakes help Chicago to be a great center of trade?

Imagine that you are loading the freight cars on each of these railroads with the produce grown in the North Central states. What produce would you send over each one? If you should load only one product on each train, how many trains would you need on each road? Perhaps you had better make a list of the railroads, and opposite each one place the names of the products you would send over each road. Do you think Chicago can be kept busy using the materials brought in over the many railroads?

In this great city there are about 160 railroad yards (Fig. 337) where freight cars are loaded and unloaded, and many warehouses for storing freight. Under the ground there are over sixty miles of tunnels through which the freight is moved to the factories, stores, and other yards. The cars are hauled through these tunnels by electric engines. You can see that there would be little room for the people if all the freight were moved through the streets. Besides the freight trains, more than 1,200 passenger trains run in and out of the city every day; and many thousands of passengers use them. There are six great passenger stations in the city.

To care for the people who come to the city every day for business and pleasure Chi-

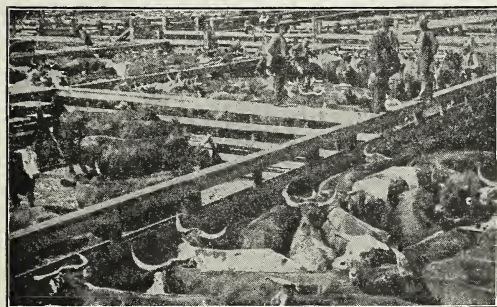


Chicago, Milwaukee, St. Paul & Pacific R. R.

Fig. 338. An observation car. Can you tell why it is usually the last car on the train?

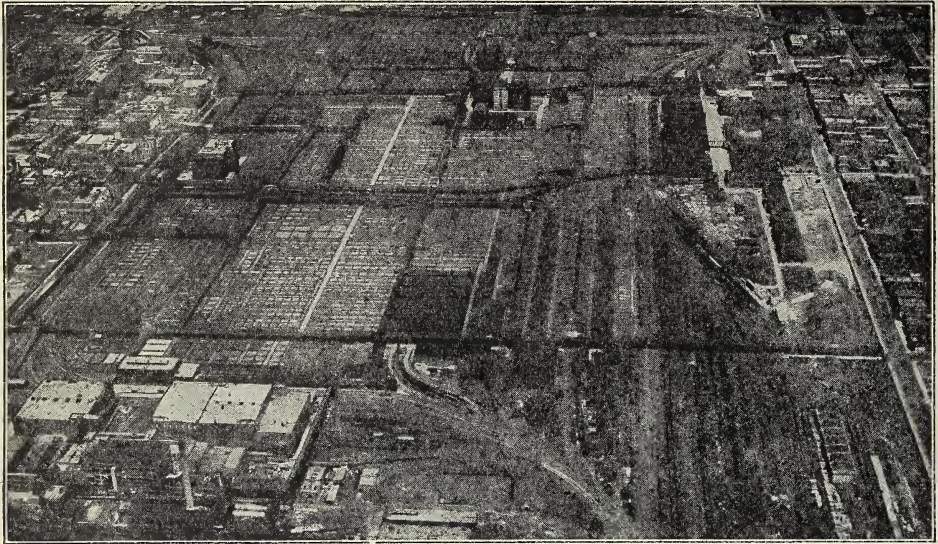
cago has many large hotels. One of these is claimed to be the largest hotel in the world. One thing is certain: Chicago has the largest moving hotel, the Pullman sleeping and parlor cars. These cars are made and cared for by the Pullman Car Company of Chicago. There are more beds in the Pullman cars that operate in this country than you would find in any hotel. Thousands of porters work on the cars, and the linen and soap that the passengers use cost thousands of dollars yearly.

The stockyards at Chicago. Suppose we see what becomes of the cattle, hogs, and sheep that are sent in over the different railroads. We learn first that all the cattle-trains are sent to the Union Stock Yards, where there are 400 acres of pens and sheds (Figs. 339 and 340). These pens and sheds will care for 40,000 cattle, 300,000 hogs, and 125,000 sheep at one time. If the 3,000,000 cattle shipped into Chicago each year should be lined up single file, the line would reach from Chicago to Germany. If all the hogs should form in line, the last one would be at the mouth of the Amazon River. The sheep would form a white line from Chicago to Alaska.



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Fig. 339. Cattle pens in the stockyards



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Fig. 340. Chicago's "Packingtown" with its 500 acres of pens for cattle, sheep, hogs, and horses. Thousands of people work in the great meat-packing plants.

The meat-packing plants. The meat-packing plants are built around the stockyards. In these factories the animals are killed, and the meat is cut into the different kinds that we buy from our meat markets and groceries. That part of Chicago is sometimes called "Packingtown." More than 60,000 people work in the stockyards and packing houses. Chicago is the leading meat-packing city of the world. Can you tell why?

Suppose we follow a bunch of hogs, bought by one of the large packing houses, from the time they leave the pens until they are cut up into the meat we buy at the shops. The hogs are first driven along runways that reach from the ground away to the top story of the packing house. There they are hung up to an overhead carrier by a heavy chain. As this carrier passes by the different workmen, the hogs are killed, washed, scalded, scraped, cut open, and dressed (Fig. 341). If the carcass is to be shipped whole, it is sent to the refrigerating rooms where it is chilled, but not as a usual thing frozen. For some mar-

kets the meat is frozen. Freezing makes it better and more tender, and the meat can be taken long distances and still be fresh.

The carcasses that are to be cut up for curing or canning are put on an endless belt, or conveyor. As they pass along, one man cuts off the heads, another the feet, another the legs, and so on, until the carcass is cut into the right kinds of pieces for packing and curing. The hams and bacon go to the curing rooms. The fat is cut out and put in great kettles, where it is made into lard. In a short time what was once a hog is turned into nearly 400 meat products and by-products. Cattle are handled in about the same way as hogs.

The by-products are those parts of the carcass that in the old days were thrown away as useless. Today, even the bones are used. They are first cooked for tallow, then ground for glue. What is left of them is used for making paint, charcoal for bleaching, shoe blacking, and fertilizer. Some of the other by-products are beef extract, an oil from which is made a kind of butter, soap, bristles,



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Fig. 341. Making hogs into ham, bacon, and pork

and hair. The horns are sold for from \$100 to \$200 a ton and are used for making knife handles, combs, and buttons. The saving and the selling of all by-products helps to lower the cost of our meat. A packer once said that everything in the hog was used except the squeal.

Shipping the meat. The large packing companies have their own ice plants and their own refrigerator cars. They ship carloads of chilled and frozen meats to their own branch houses in many parts of the country. You have seen their cars or trucks delivering meat to the butcher and grocer. These companies also handle butter, cheese, eggs, and poultry. You see, they have the cars and can ship these products with the meats.

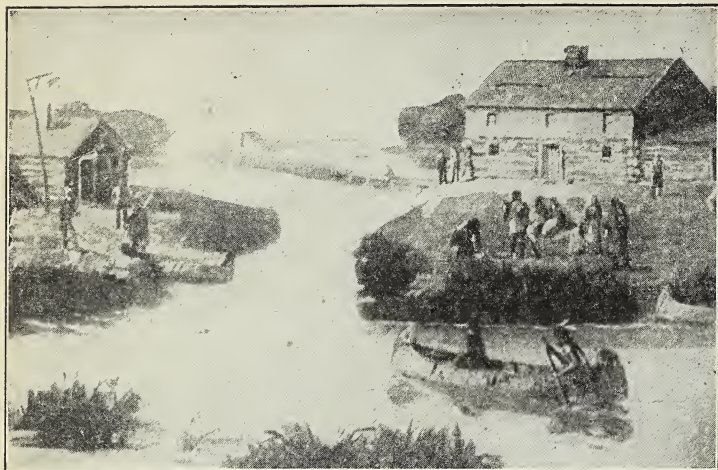
A great grain city. Some of those trains you sent in to Chicago were loaded with grain—wheat, corn, oats, rye, and barley. The mammoth elevators there can store more than sixty million bushels of grain. Some of it is made into bread and breakfast foods right in Chicago. Most of it is shipped to other cities and to foreign countries. Besides being

the leading meat-packing city, Chicago is also the greatest grain market in the world. Give a good reason why this is true.

Lumber, farm machinery, and tools. Chicago is one of the largest lumber markets in the country, and the city leads in the manufacture of farm machinery. You see, the lumber required for the making of these machines and tools is close at hand. Can you tell where this lumber comes from? The thousands of men working in the great farm-machine factories make almost every machine or tool any farmer in the world may want—big plows and little plows, big cultivators and little cultivators, big harvesters and threshers, and little sickles, with twine enough to bind all the grain cut by the reapers. Carloads of farm machinery leave Chicago every day. The city is also a leading center for making furniture.

Iron and steel making. If you were to visit Chicago, you would find that the largest space for manufacturing is in the southern part of the city. Here, then, you may see many tall smokestacks pouring forth great clouds of coal smoke. Long, low steamers heavy with iron ore for those furnaces, foundries, and mills pass Chicago's front door. It is here that the ore is made into pig iron and steel bars for the factories that make tools, machinery, and other articles needing iron or steel. Hammond and Gary lie just across the state line in Indiana. These two cities with South Chicago almost make one great iron city that rivals Pittsburgh in the amount of iron and steel made.

Chicago has many other factories. It is said that there are more different kinds of business here than in any other city in the world. This city leads in the making of band instruments, pianos, candy, and so many other things that we should tire of trying to name them. Do you see why Chicago is called a giant? It is also called a "young" giant. That is because 100 years ago there were only a few families living where this great city now stands.



Courtesy Chicago Historical Society

Fig. 342. Chicago, 100 years ago, where the north and south branches of the Chicago River join and flow into the lake. Now look at Fig. 343.

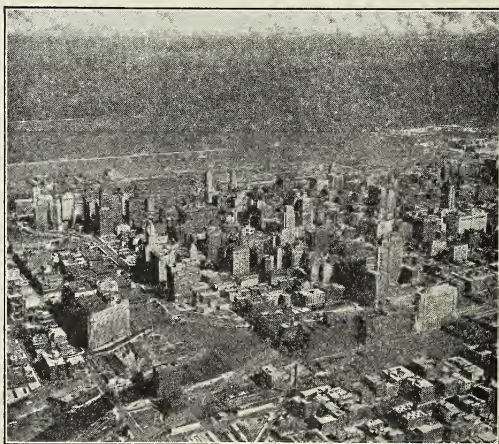
How Chicago has grown. We know that Father Marquette and Joliet were the first white men to stop at what is now Chicago. We also know that La Salle said that some day a great city would be built on that ground. If he could stand there today, he would see that he had spoken the truth. He would be surprised to learn that he could now sail the *Griffin* through that river and a canal all the way to the Illinois River and on to the Mississippi.

We know that if La Salle could actually stand again at his landing place of 1683, he would feel lost and perhaps frightened by the tall buildings, the rumble and roar of the elevated trains, street cars, trucks, and automobiles, and the hurry and bustle of the thousands of people about him. He would be standing near the famous Loop district, where the elevated trains from all parts of the city circle, or loop, around several blocks and go out again. The heart of the business center of this great city of over three million people is located inside the Loop.

La Salle may have given Chicago its name, for it is known that he sent a letter from Che-ka-gou in 1683. It is thought that

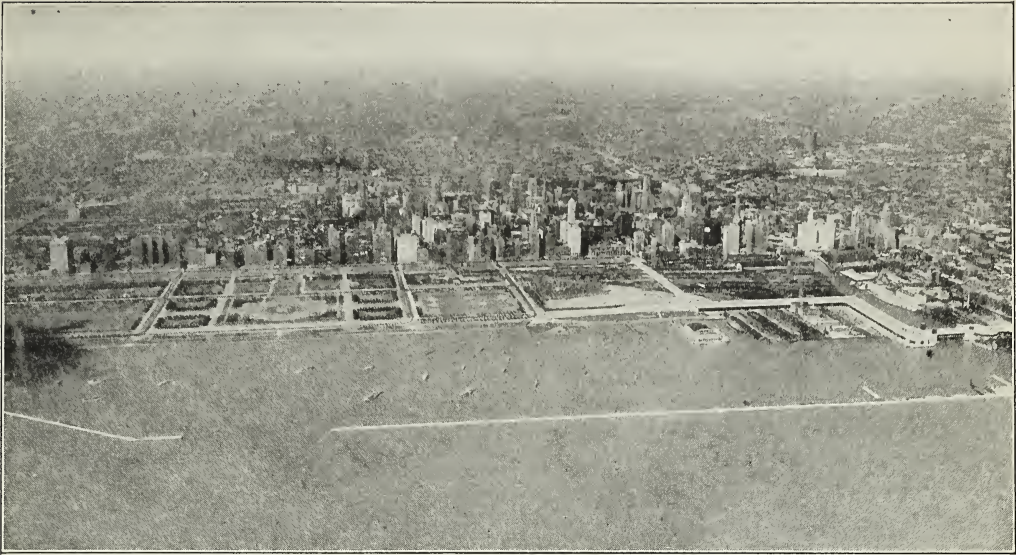
Che-ka-gou was the Indian name for a wild onion that grew abundantly here. White men put up the first building in 1803, at Fort Dearborn, near the mouth of the Chicago River on the south side. The next spring John Kinzie built a house on the north side of the river and moved his family there. In 1812 the Indians killed nearly all of the soldiers and the settlers and burned the fort. They did not kill Kinzie and his family nor burn his house.

Michigan Avenue, one of Chicago's finest streets, passes right near the site of old Fort Dearborn and the spot where La Salle landed. The foundation for one end of the bridge across the river covers part of this ground. Michigan Avenue crosses the river on a wonderful double width, two-story, two-leafed bascule bridge. Four times as many vehicles can cross this bridge at one time as can cross on any one of the bridges we see



© Chicago Aerial Survey Co.

Fig. 343. This is the same spot shown in Fig. 342.



© Chicago Aerial Survey Co.

Fig. 344. Michigan Boulevard and Grant Park. The lake at one time came up to Michigan Boulevard, but the city filled in the lake, to make this beautiful park.

along the highways. A bascule bridge can be separated in the middle, and each half lifted up out of the way of the boats that pass up and down this important little river. It is said that more vehicles pass over the Michigan Avenue bridge in Chicago every day than over any other bridge in the world in the same length of time.

Looking over the city. Suppose we take the elevator to the top of one of the skyscrapers that stand just north of the bridge. From here we may look out over the city. To the east and extending into the lake is the long Navy Pier, the landing-place for passenger steamers and a playground for the people in the hot summer weather. Farther north for miles along the lake front we see Lincoln Park with its lovely trees, its zoo, bathing beaches, and boat harbors.

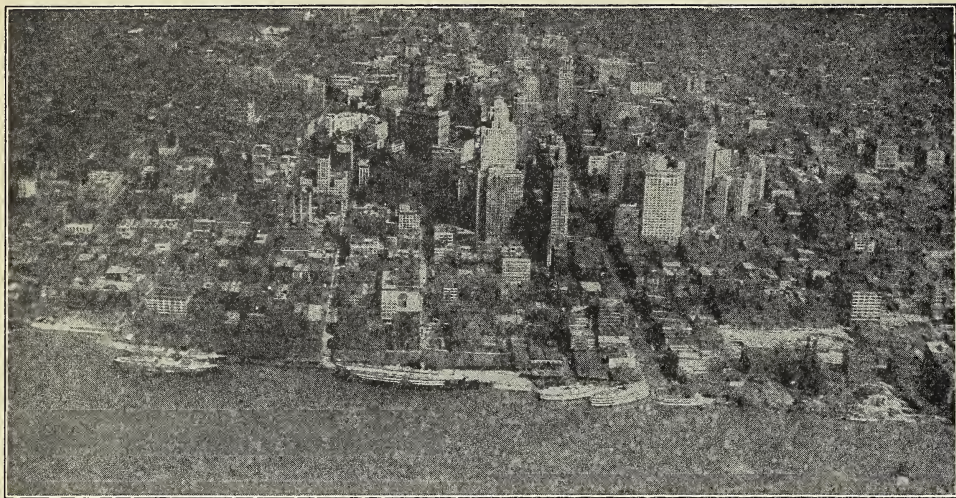
To the south between Michigan Boulevard and the lake lies Grant Park, called the Front Yard of Chicago. About halfway down the park is the beautiful Buckingham Memorial Fountain throwing water 110 feet in the air. At the south end of the park we see the Field

Museum and Soldier Field, with its great stadium which will seat 150,000 people. Near the Field Museum are the Shedd Aquarium, with hundreds of kinds of fishes, and the Adler Planetarium, where you can see how the stars and planets move in the sky. Wide drives run to the north and south. At one time the lake was close to Michigan Boulevard, but the city has been filling it in for miles along the shore north and south from the center of the city. On the "built" land beautiful parks and drives have been made. The work is still going on. When this task of filling is finished, there will be drives and parks for over twenty miles along the lake front.

Around the city to the north, south, and west are large and small parks where the people may rest and play. Chicago is said to have more parks than any other American city.

OTHER CENTRAL STATES CITIES

From wagons and carriages to automobiles. When the automobile was invented, Detroit had the wagon and the carriage factories that could easily be changed to make



© Kalee, Inc.

Fig. 345. Detroit, the Automobile City, which began as the little French fur-trading post, Fort Cadillac. What is the name of the river shown in the picture? What country is across the river from Detroit?

the new horseless carriages. The first maker was so successful that others came, and soon Detroit was known as an automobile city. Almost all the motor cars in the United States have been made in and near Detroit. It is claimed that four out of every five cars in the United States were made in the state of Michigan. This region not only makes automobiles for our country, but many of those that are used all over the world.

Not always are all the parts for the automobile made in one plant. Different cities and towns make one particular thing. Toledo, Ohio, makes spark plugs for the engines, and Akron tires and rims. If there are 30,000,000 automobiles in the United States, how many tires are needed for all of them with a spare tire for each car?

How automobiles are made. The first automobile was made from an old buggy. A steam engine was put into it to turn the rear wheels. This made the old buggy move, but it looked queer (Fig. 347). People laughed at the strange horseless carriage. They said that the maker was crazy to fool away his time on such a thing. But he and others kept trying,

until just before 1900 the first automobiles were made and sold. They have been so improved that now those first cars look almost as funny to us as the old Conestoga wagons.

Since an automobile is made mostly of iron and steel, at least one of the large motor-car companies has its own iron mines in northern Michigan, and the ore is shipped to Detroit in the company's own steamers. The coal to run the mills and furnaces may be brought from West Virginia over the company's own railroad and in its own cars. Great train-loads of lumber come from the northern forests, and many car-loads of hardwoods from Kentucky and West Virginia.

Often as many as 25,000 to 80,000 men work in one automobile factory. Usually different departments begin work at different times in the morning and stop at different times in the afternoon so that the streets will not become so crowded. Several acres are set aside for parking the cars that belong to the workmen.

Besides the buildings in which the iron and steel are made into automobiles, there are other whole factories for making cloth,

leather, glass, wire, and other materials that go into a car. The whole plant, or factory, is the machinist's dream come true. Here nothing is done by hand, nothing lifted, carried, or pushed by hand, if a machine can do the work. Conveyors carry blocks of iron and steel to the machines that hammer, stamp, and bore them into the shapes needed. In the assembly lines each workman does just one thing, and he stands in just one place to do it.

Nothing that is worth saving is wasted. Slag and clinkers from the blast furnaces are used in making concrete. Iron and steel scraps are re-melted and re-cast. Waste paper is made into cardboard. Oil and grease are scraped up and worked over. Waste wood is made into acid and paper.

Let us see how a car is put together at the final assembly line. Men work on both sides of a moving belt that carries the car along. The first part of the car that comes on the belt is the frame with the axle, springs, and brakes already attached. The wheels are

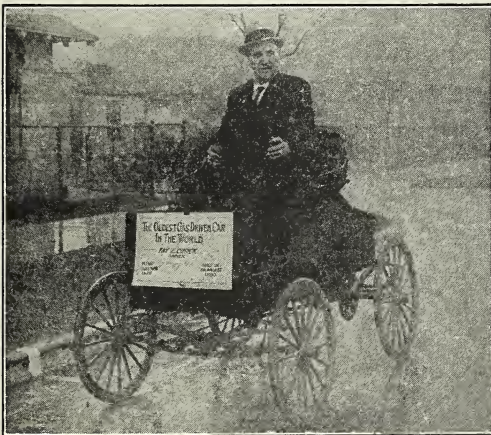


Courtesy Ford Motor Co.

Fig. 346. The assembly line in one of Detroit's automobile factories

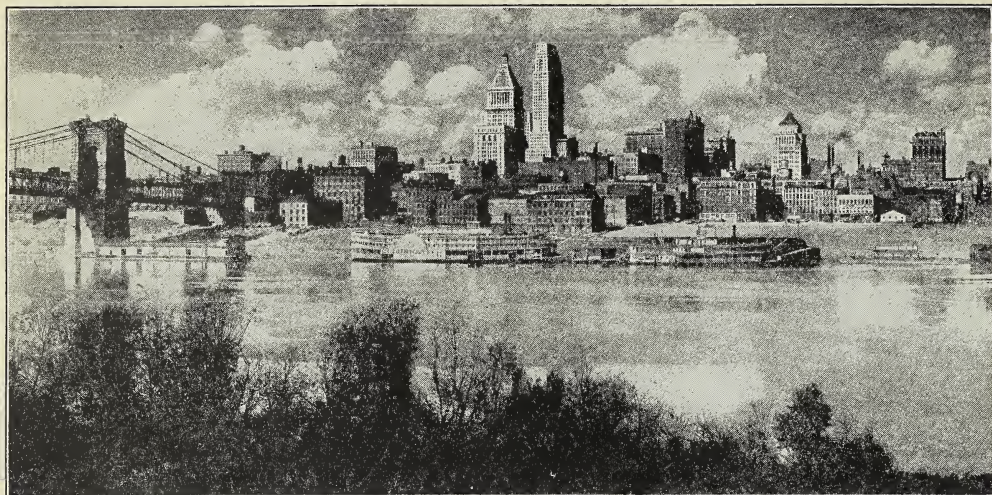
fastened on, each one by a different man. The motor is lowered into place from an overhead hoist, and a workman bolts it fast. A gasoline tank, radiator, and other parts are fastened on as the frame moves by. The body comes down from an overhead balcony and is fastened to the frame. All this time the car is moving slowly along a runway between the men. Near the end of the line, water is put into the radiator and gasoline into the tank. At the end of the line, when the car is complete, the engine is started, and the car is driven off the line to a brake-test machine, where the brakes are tested and inspection is made of the lights. The car may be driven away by the man who buys it, but sometimes the parts are shipped thousands of miles away before they are put together, or assembled. Detroit is headquarters for several makes of cars known all over the world. Automobiles have become so necessary that there is now one to about every four people in the United States.

Other Detroit manufactures. Detroit makes other things besides automobiles. Some of them are leather, copper, aluminum, lead, and brass goods, books, toys, adding machines, vacuum cleaners, and cigars.



© Underwood and Underwood

Fig. 347. One of the first automobiles. The owner says it is the oldest automobile in the world.



Courtesy Cincinnati Chamber of Commerce. Photo by Longley

Fig. 348. Cincinnati, which began as little Fort Washington in the days of the Ohio Country. With what state does the bridge in the picture join Cincinnati?

Cleveland. When Moses Cleveland and his Connecticut Yankees made a little settlement where the Cuyahoga River empties into Lake Erie, and fought the wolves, bears, and Indians, they did not dream that the little river valley and all the hills about would some day be covered with a great city. They could not see the great boats steaming into the harbor to unload iron ore, lumber, and wheat at the wharves. There are important shipyards in Cleveland, where many ships are repaired. This city is one of the largest iron-ore markets in the world and has many iron and steel manufactures.

For many years Cleveland did not grow very rapidly. It was really only a village until the Erie Canal was built connecting Lake Erie with the East, and the Ohio Canal connected Cleveland with the Ohio River at Portsmouth. Then the farmers could ship their grain and other farm products, and Cleveland grew. Other towns were built along the Ohio Canal as they were along the Erie Canal. Cleveland has grown to be the largest city on Lake Erie and the sixth city in the United States. It is sometimes called

the Forest City because the streets are lined with beautiful trees.

Other cities. On one of his trips with Daniel Boone to fight the Indians, George Rogers Clark stopped where Cincinnati now stands. Later a fort was built there. After the settlers came, the town grew as the country around about was settled. In time Cincinnati began to cure and pack so much meat that it was given the nickname "Porkopolis," and for a while was the largest meat-packing city in the United States. Much meat is still packed in this city. Cincinnati also manufactures machinery, soap, clothing, and shoes for people all over the country.

Indianapolis, Indiana, is another great city that has grown from a little settlement of the days of flatboats and Conestoga wagons. Like the other cities of this great cattle and grain region, it is busy buying and selling the products of the fine farm lands around it, and making things that the people need.

A long time after Joliet and Father Marquette saw the Missouri emptying its muddy water into the Mississippi River, the French built a fort near the mouth of the Missouri,



By Ewing Galloway, N. Y.

Fig. 349. Eads Bridge, the first to be built across the Mississippi at St. Louis. On the upper deck street-cars and automobiles cross; below are the railroad tracks. There are five bridges across the river at St. Louis.

and named it St. Louis in honor of King Louis XV of France. Here hunters and trappers brought their furs from far up the rivers and traded them with the French. St. Louis is still a great fur market.

When settlers began to move farther into the West, St. Louis was the halfway place where they stopped before beginning the long journey to the Rocky Mountains. People came down the Ohio and up the Mississippi. They bought supplies at St. Louis and at St. Joseph, on the Missouri. Flatboats took the farmer's produce down the river to New Orleans. Then the steamboat came, and the business of the city grew still more.

By looking at the map on page 374 you can see that St. Louis is on the highway of the railroads to the West. With its railroads and its steamboats it is one of the greatest shipping cities in our country. The products of the rich Mississippi Valley pour into St. Louis to be shipped throughout our country and to other parts of the world. Of course St. Louis manufactures many things that farmers and city people need: boots and shoes, flour, sugar, railroad cars, tools, and many others. You remember that it is one of the

great meat-packing cities. Why should we expect to find meat-packing in nearly all of the cities of the North Central states?

THE BAD LANDS AND THE BLACK HILLS

We have spent some time among the lakes of Minnesota and around the Great Lakes. Suppose we visit scenery that is entirely different. We will follow the Atlantic-Yellowstone-Pacific Highway from Chicago west across Iowa to Sioux City and up the Missouri River to the White River. As we travel up that river, we come to the Bad Lands of South Dakota. Here the water has washed out the rock and clay in queer shapes. Some are like toadstools, pillars,

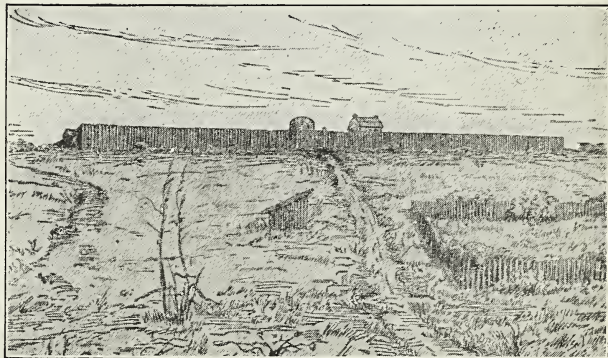
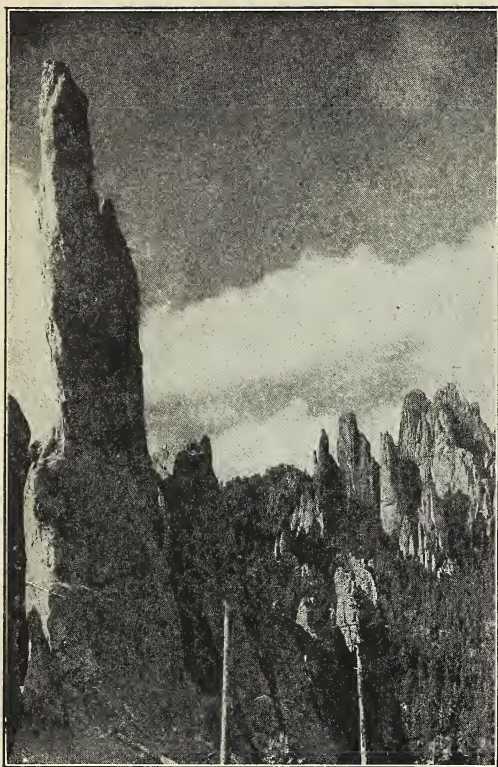


Fig. 350. This little French fort was the beginning of St. Louis.



Courtesy Chicago and North Western Railroad
Fig. 351. Cathedral of the Needles in the Black Hills of South Dakota

tables, and other forms so strange that you cannot name them. The rocks and clays are colored gray, yellow, and rose. We see no green except in the little valleys and on the tablelands, or mesas. Now in the distance we see the Black Hills rising from the plains. We guess that they must have been named black from the dark pine trees that grow on the hills and in the valleys. It is a beautiful country, with queer-shaped mountains, and clear cold streams fine for trout fishing. It seems strange to come into these mountains from off the Great Plains, with no other mountains for many miles around. At the southern end of the mountains is Wind Cave National Park. This cave is so named because the wind is blowing in or out of the cave most of the time. In the Black Hills there

are rich gold mines from which millions of dollars worth of gold have been taken.

QUESTIONS TO ANSWER

1. How are we reminded of Chicago whenever we spend a night on the train?
2. What are some of the strange things made from hogs and cattle?
3. Why should Chicago make so much farm machinery?
4. How old is Chicago, counting from the time the first house was built by white men?
5. Can you see why Detroit is located just where it is?
6. Why should not Toledo have grown as large as Detroit?
7. Tell why Cleveland is so well located for making steel ships?
8. Why should not Cincinnati still be the greatest meat-packing city?
9. St. Louis is called the gateway to the West. Study the map and give some reasons for this.
10. Which are the greater, the lake cities or the river cities? Why?

THINGS TO DO

1. Write the story of Mark's hog from the time it was shipped into Chicago until someone in Boston ate the ham the next spring.
2. From advertisements in magazines and newspapers make a list of articles that are made in Chicago.
3. Write a letter to a friend telling about a week spent in Chicago.
4. If anyone in the class has ever been in Chicago, have him tell the class of his visit there.
5. From the list of cities in the back of the book choose one article that you could order from each of the larger cities of the North Central states. On an outline map locate the larger cities of this region and draw a picture or write the name of one or two articles made or handled there.

Books to read: Brigham, *From Trail to Railway*, pp. 63-125; Coe, *Makers of the Nation*, pp. 225-240; Davidson, *Founders and Builders of Our Country*, pp. 130-145; Fairbanks, *North America*, pp. 186-199; Hubbard, *Citizenship Plays*, pp. 139-149; Jordan and Cather, *Highlights of Geography*, pp. 68-79; Lefferts, *Our Own United States*, pp. 158-165, 180-188, 195-209; *National Geographic Magazine*, November, 1923, December, 1925; Nida, *Following the Frontier*, pp. 89-215; Otis, *Benjamin of Ohio*, complete; Pitkin and Hughes, *Mill and Factory*, pp. 164-181; Rocheleau, *Great American Industries—Transportation*, pp. 5-29; Southworth and Kramer, *Great Cities of the United States*, pp. 41-66, 89-140; Woodburn and Moran, *The Makers of America*, pp. 211-225.



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Fig. 352. De Soto lands in Florida to begin the three years of wandering that took him through our states of Florida, Georgia, North and South Carolina, Alabama, Mississippi, Arkansas, and Louisiana.

THE SOUTH CENTRAL STATES

SPANISH, FRENCH, AND AMERICANS IN THE SOUTH

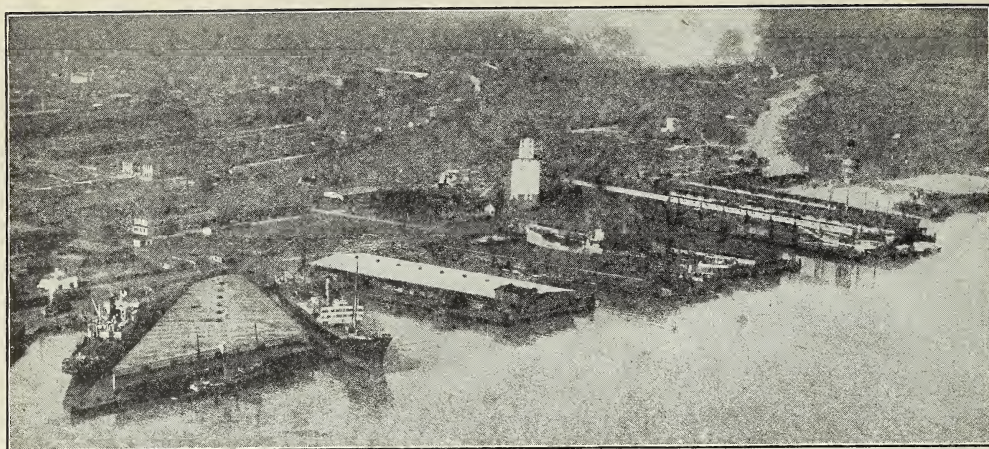
We have learned about the settlement and growth of all of the United States east of the Mississippi River, except the states which lie along the Gulf of Mexico—Florida, Alabama, and Mississippi. This section was settled by three different peoples. The first to make a settlement anywhere in what is now the United States were the Spanish. They settled in Florida. Where was that first settlement, now the oldest town in the United States? What English colony was founded partly to protect the other colonies from the Spanish? We already know that the French settled along the Mississippi River. Who explored the Mississippi for the French? Where were these first French settlements?

DE SOTO, A SPANISH GOLD HUNTER

De Soto's boyhood and first trip to America. Many, many years ago there lived in a great castle in Spain a nobleman by the name of Hernando De Soto. While he was still a boy, he went with Spanish expeditions to Central and South America in search of gold. For fifteen years he stayed in the

New World; then he returned to Spain with a great fortune and married his boyhood sweetheart, Isabella. But he soon spent most of his money and was restless to go to America again to hunt for more gold; so the king made him governor of Cuba.

De Soto sets sail for Florida. De Soto asked and received from King Charles permission to explore Florida and search for gold. So with an army of six hundred men, and twelve priests, he set sail. It was a great day when this party sailed; flags were flying, plumes waving, and trumpets blowing. They took plenty of ammunition and great supplies of food with them—hundreds of bushels of grain and hundreds of cattle and hogs. Besides, there were about enough horses for half the men. De Soto even took a pack of bloodhounds along to help catch the Indians, and chains to bind the savages. Nine ships were required to carry all these men and supplies. They sailed around the end of Florida and up the west coast to Tampa Bay. Here the party left the ships and began three years of wandering in search of gold.



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Fig. 353. Part of the harbor at Mobile, Alabama. Mobile is one of the important seaports of the South Central states. Find it on the map (page 238).

De Soto's wanderings in Georgia. De Soto did not find any gold in the lowlands of Florida, of course; so he marched north into Georgia. As he went along, he took some of the Indians as prisoners and bound them in chains so that they could not trouble him. Sometimes he made the proud warriors carry his baggage; he even hunted them down with his bloodhounds. All this frightened and angered the Indians. They never forgot the cruelty of the Spaniards. Ever after they hated all white men with a deep and bitter hate, and fought the settlers savagely.

On the march through Georgia De Soto found plenty of game, wild fruit, and grass for the cattle and horses. After a long march they came to the Fall Line, and then to the mountains where the traveling was hard. There is really some gold in these mountains; but even if they had found it, those Spaniards would not have been willing to do the hard work necessary to mine it. You see, De Soto was looking for gold that the Indians had already mined.

The Indians now told De Soto that farther to the west there was plenty of gold, as well as other riches. He had been so cruel to them that they told him almost anything to get him

away from their villages. To go west they would have to cross the mountains; so De Soto turned back south. As near as we can tell, De Soto and his men were in the western part of either North or South Carolina when they turned back from the mountains and started southwest through Georgia. These first explorers of the southeastern part of our country had come to the southern end of the Appalachian Mountains (Fig. 355).

The Spaniards explore Alabama. We do not know the route the Spaniards followed into what is now Alabama. Very likely they traveled up the valley of the Savannah River and crossed over westward into the valley of the Alabama River. They followed the Alabama River southward until they came to the village of Maubila, the home of the Maubila Indians. Here, just north of where Mobile now stands, the Alabama and the Tombigbee rivers meet. The Indian chief at Maubila invited De Soto to come into the village, and he accepted the invitation in good faith. But he had been in the village only a short time when a shower of arrows fell on him and his men, killing a number of them. This was the beginning of a battle that raged for nine hours before the Indians were beaten.



Fig. 354. If De Soto could return to the region of our South Central states today, he would find thousands of acres of cotton fields like this one. In his time this region was nearly all forest.

De Soto lost many men and horses. A few more such fights, and the whole party would be wiped out.

By the time winter came, De Soto's men were so discouraged that they did not want to go on. So they went a little way into what is now the state of Mississippi, and camped there until spring. The beautiful armor they had worn when they left Spain was almost gone. Some of the men had to wear skins of animals for clothing. Nearly all of their medicines were gone, and they knew no way of doctoring the sick. Their ammunition, too, was nearly gone; so it was almost impossible to kill the game they found in the forest. They were often hungry; they had long before eaten the cattle and hogs they had brought with them from Spain. If they had not found nuts, persimmons, and berries in the woods, they would have starved. De Soto knew that the governor of Cuba had sent supplies to the place where Pensacola now stands, but he would not tell his men, for he was afraid they would leave

him if they knew it. His wife sent a messenger to him, asking him to give up his search for gold and come home, but he was too proud to go home without his treasure.

Discovery of the Mississippi. In the spring the Spaniards marched northwest across the state of Mississippi, still looking for gold. Then one day in 1541, about two years after they had landed at Tampa Bay, as De Soto and his men rode out of the forest, they suddenly saw a great river. This was



Fig. 355. De Soto's journey through southeastern and south central United States. Now look at the map on page 317.

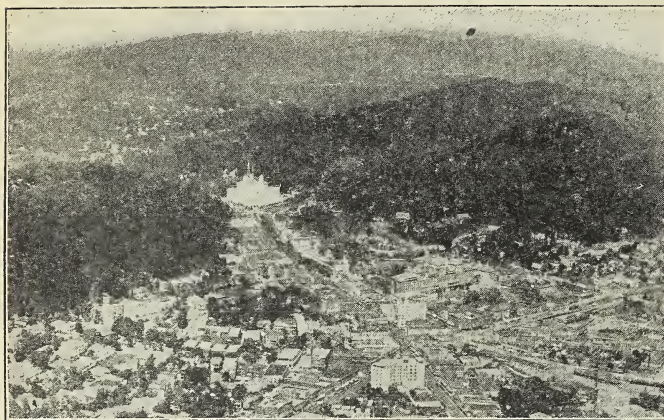


Fig. 356. Hot Springs, in the pine-covered Ouachita Mountains. Many people come here during the winter for horseback riding, golf, and other sports, and to bathe in the waters of the famous springs.

Courtesy Missouri Pacific R. R.

about opposite where Helena, Arkansas, now stands. The river was wide, for it was at the time of the spring floods. De Soto found that the Indians called it Messacheba, Father of Waters. He was the first white man to see this great river that we call the Mississippi. Here De Soto set the Indians to work making rafts and boats to carry him and his men across the river.

De Soto visits Arkansas. For nearly a year De Soto wandered about in what is now the state of Arkansas. We do not know the exact route he followed, but it is thought that he went up the White River to the Ozark Plateau, then south across the Arkansas River. One day De Soto fell sick, and a friendly Indian took him to a place where hot water bubbled up out of the ground. De Soto drank of the water, bathed in it, and felt better. "Now," he thought, "I have found the Fountain of Youth for which Ponce de Leon searched." We believe that he must have found the famous Hot Springs of Arkansas (Fig. 356). He spent the third winter on the Ouachita River.

De Soto's death. De Soto and the few men he had left now built a boat and floated down the Ouachita and the Red rivers into what is now Louisiana, until they came to the

Mississippi. De Soto himself was tired and worn from his three years of wandering, and he fell sick with a fever from which he soon died. De Soto's men did not want the Indians to know that he was dead, because they thought that he was a god. Had they once found out that he had died like other men, they would have fought the white men more than ever. So his followers wrapped his body in a blanket filled with sand, rowed out to the middle of the Mississippi at midnight, and buried him in the great

river that he had discovered.

The little band of men that was left had only one thought: they wanted to get away from the country where they had suffered so many hardships. They floated down the wide Mississippi River and on to the Gulf of Mexico. But only a few long-haired, half-naked, half-starved men of all that party which left Spain in such splendor and glory ever lived to reach Mexico.

HOW THE UNITED STATES BOUGHT A MILLION SQUARE MILES OF LAND

Spain and the land west of the Mississippi. La Salle did not make his daring trip down the Mississippi River for more than a hundred years after De Soto first saw it. As you know, he claimed all the valley for France, and the French made settlements at Mobile, Biloxi, and New Orleans. Then, you remember, the land from the Mississippi to the Atlantic became the United States of America when we fought our War for Independence. Beyond the Mississippi, way west to the Pacific, Spain owned the land, for Spanish explorers had journeyed north from Mexico searching for gold in what is now the southwestern part of our country. We shall soon learn of these explorers and of Spanish settle-

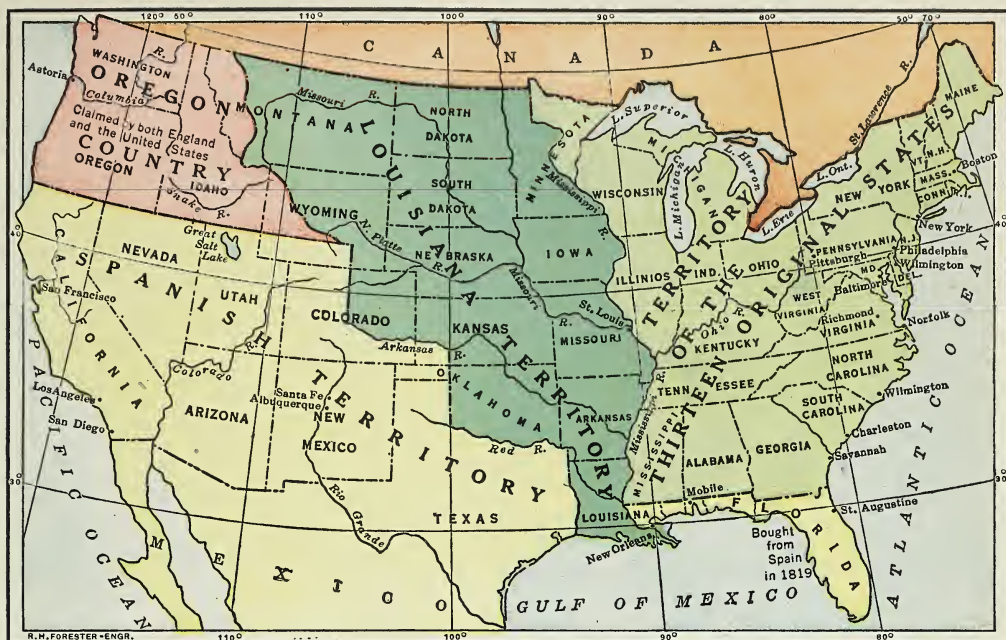


Fig. 357. How the Louisiana Purchase increased the size of our country. We shall learn later how all this Spanish territory and the Oregon Country became part of the United States.

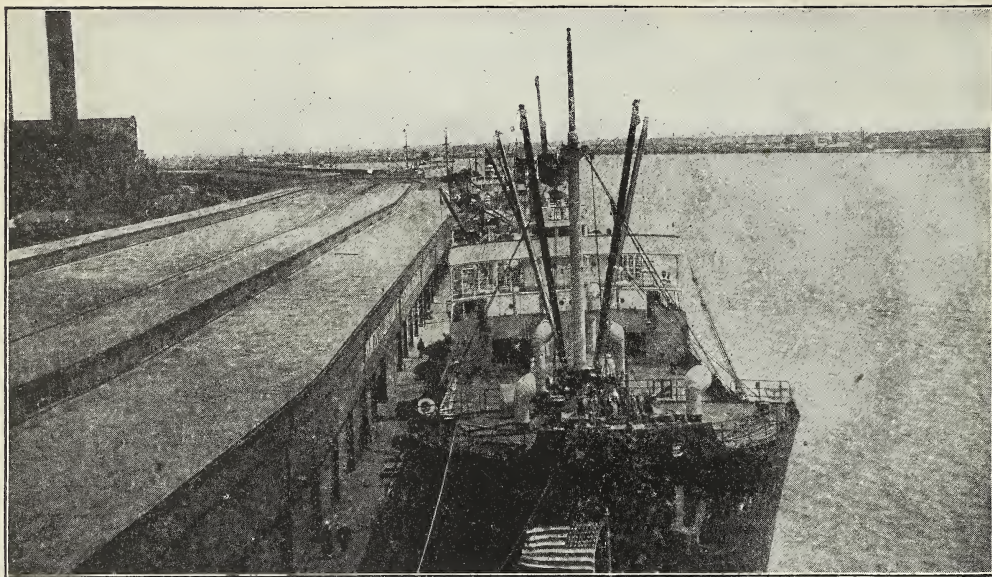
ments throughout our Southwest and on the Pacific coast. Spain also owned what is now southern Alabama and Mississippi. This was called West Florida. So you see that when our country was founded, Spain owned all the land around the mouth of the Mississippi River. Of course we remember that La Salle had claimed all this country for France, and we know that the French had made settlements. But there had been wars in Europe, and Spain had won the land from France.

At first Spain allowed the Americans to move into the country along the Mississippi, and to trade. The Americans even made a few small settlements here and there along the west side of the river. It was into Spanish territory that Daniel Boone had moved when he left Kentucky and settled near St. Louis. After the War for Independence the pioneers of Kentucky, Tennessee, and the Ohio Country shipped their lumber, grain, meat, and other produce by flatboat down the Ohio and

Mississippi rivers to New Orleans, where ocean ships carried it to other ports.

Trouble between Americans and Spanish. For a time the Spaniards allowed the Americans to store their goods at New Orleans, to wait for the ocean ships that would carry their produce to the eastern states and to Europe. But it was not long until the Americans were doing so much business that the Spaniards became jealous and would no longer let them store their produce in New Orleans. They even arrested some of the American boatmen and put them in prison.

This enraged the Americans in the Mississippi Valley. They had no other good way of getting their produce to market; the roads over the mountains were so poor that it was almost impossible to haul goods over them to the East. They were so angry at the way they had been treated in New Orleans that they threatened to raise an army and take the city away from the Spaniards.



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Fig. 358. New Orleans is today just as important a seaport as it was in the early days of our country. These ocean ships are waiting for their loads of cotton, rice, sugar, molasses, and other products, which they will carry to other seaports in many parts of the world.

Instead, they asked the United States to buy New Orleans from Spain, and went so far as to say that if this were not done, they would leave the United States and form their own government. So President Jefferson made plans to buy West Florida and a strip of land at the mouth of the Mississippi, including the city of New Orleans. Then things happened in Europe that changed affairs in this country.

Napoleon wins Louisiana. Napoleon Bonaparte had become ruler of France. Napoleon was so great a general and had won so many wars that he thought he could become master of the world. He had defeated Germany, Austria, Italy, and all the little countries of Europe, and had picked a quarrel with Spain and conquered that country, too. He even arrested the king of Spain and his family, and made the king sign Louisiana over to France. President Jefferson believed that France under Napoleon's rule would be a worse neighbor for this country than Spain had been. He was afraid that France would

try to conquer the United States if she kept this land in America. So Jefferson felt more than ever that the United States must buy New Orleans and any land east of the Mississippi that France might take from Spain.

The Louisiana Purchase. To buy this land, Congress voted \$2,000,000, supposing that would be money enough, and Jefferson sent Robert Livingston and James Monroe to France to do the buying. Now if Napoleon had thought that he could keep it, he would never have agreed to sell one foot of France's land in America. He did not care to help the United States, but he was afraid that England might take Louisiana away from him. She had more warships than France had, and could easily keep him from sending an army to Louisiana to protect his land. He would much prefer to see the Americans own Louisiana than the English. Therefore he surprised Livingston and Monroe by offering to sell not only New Orleans but all of the great Louisiana Territory to America for \$15,000,000.

Now if your father should give you ten dollars with which to buy a calf, and the farmer should offer to sell you his whole herd of cattle for one hundred dollars if you drove them home with you, would you take the herd? Livingstone and Monroe faced the same sort of problem. They knew little about the country that Napoleon offered to sell them. They did know that it stretched from the Mississippi River to the top of the Rocky Mountains, and from the Gulf of Mexico to Canada. They knew they had been offered a wonderful bargain, and they were too far away to ask Jefferson what to do. There was no cable, or telegraph, or radio across the ocean. They were afraid that Napoleon might change his mind before they could get an answer to a letter; so they closed the deal!

Jefferson was amazed when he heard the news. The United States did not have much money; but when he saw that he could double the size of his country at a cost of two cents an acre, he quickly accepted the bargain. Congress voted the money and Louisiana was ours. This was called the Louisiana Purchase. It was the biggest real-estate deal ever made by any country. Today we may travel over thirteen states, over all of some and parts of others, and not leave the land of the Louisiana Purchase. This was more than three times as much land as was in the Thirteen Original Colonies. Look at the map on page 235 and find the states and parts of states that were made from this Territory. The French people in Louisiana stayed on under American rule, and in some sections of the state today the people still speak French. The counties in the state of Louisiana are called parishes.

QUESTIONS TO ANSWER

1. Which ones of these Southern states have we studied before? 2. In what direction do nearly all rivers flow? 3. Are these states mostly highland or lowland? (Study the map facing page 1 and the one on page 238.) Name and locate two mountain sec-

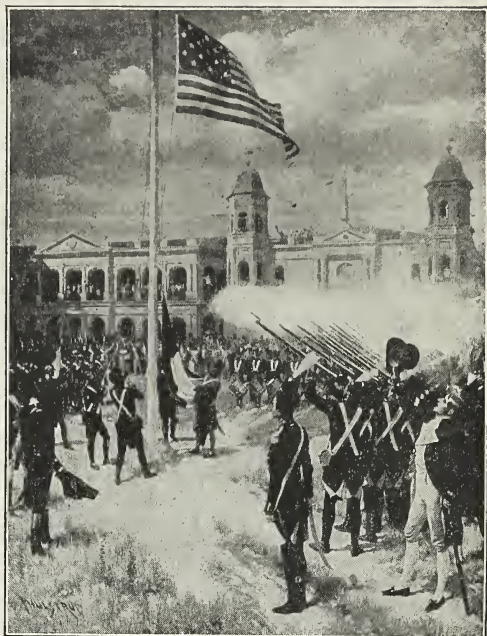


Photo by Fritch. From the painting by De Thulstrup
Fig. 359. The French flag comes down and the Stars and Stripes go up in New Orleans as the United States takes over the Louisiana Territory.

tions. 4. How does the surface compare with that of New England?

5. From what general direction did the Spaniards come into the Southern states? 6. Can you explain why the Spaniards made almost no settlements in the South? 7. Trace De Soto's route on the colored map. What mountains did De Soto see? Mention three rivers he must have crossed. 8. What did De Soto do to the Indians that caused the English and Americans trouble in settling Alabama?

9. From what two directions did the French come into this region? 10. Locate the places they settled. 11. Explain why the Americans needed New Orleans so badly. 12. Locate the land that President Jefferson sent Livingston and Monroe to buy from France. 13. Why did Napoleon sell us Louisiana so cheaply?

THINGS TO DO

1. On an outline map show De Soto's wanderings. Sketch in the rivers that you know he found and crossed. 2. Locate the places the French settled and place them on the outline map. 3. On your map show the land of the Louisiana Purchase.

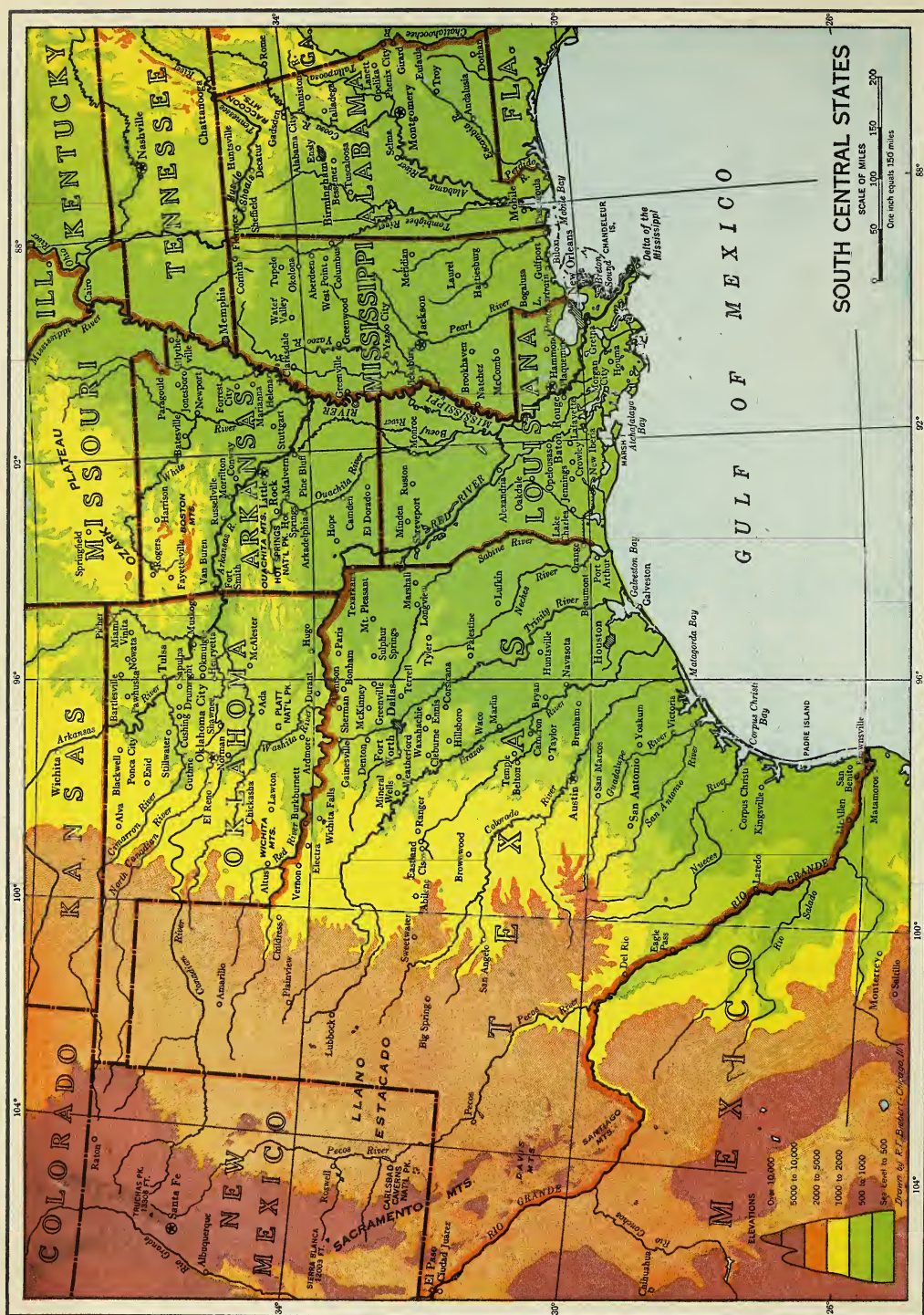
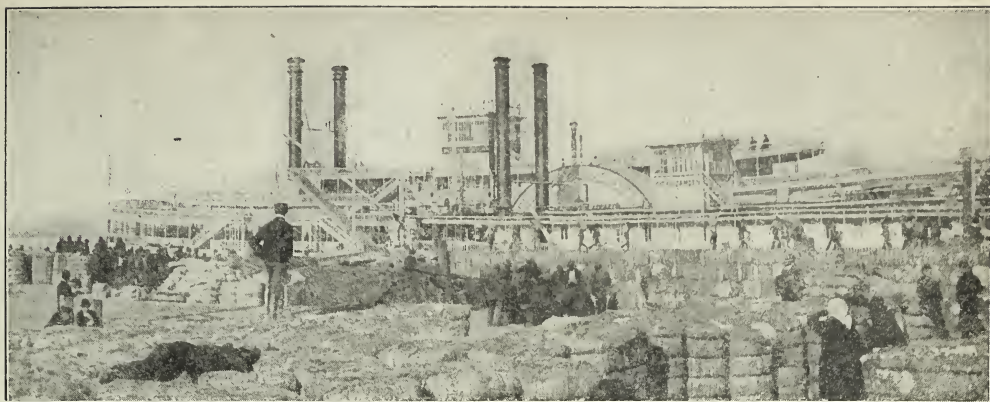


Fig. 360. Map of the South Central states



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Fig. 361. Cotton on the docks along the Mississippi at New Orleans. It has been brought down the river on boats like the ones in the picture. Ocean ships will carry some of it to other ports.

THE LAND OF COTTON

How the Americans moved into the South. We know that in the early days the Cherokee and Creek Indians, together with the Spaniards, kept the English and Americans from moving westward from Georgia around the southern end of the mountains. But settlers moved across the mountains through Cumberland Gap into Tennessee and Kentucky, and from there into what is now Mississippi and Alabama. In this way they went around the part of the country held by the Indians. Look at the map on page 238 and you can see how the first settlers could use the rivers. They could travel down the Tennessee into northern Mississippi and Alabama. Then they could follow the Coosa, Tombigbee, and Alabama rivers. And the Mississippi was always a great highway for travel and trade.

After President Jefferson bought the Louisiana Territory, a treaty was made with the Indians, and they were given land west of the Mississippi. So they left Alabama and Mississippi, and moved to this Indian Territory, as it was called. Then settlers came in great numbers, mostly from Georgia, South Carolina, Tennessee, and Kentucky. The worn-out land of their plantations could no longer grow good crops. Here was plenty

of new rich land for them. So, while the Americans were pouring into the Ohio Country, they were also spreading south toward the Gulf of Mexico.

These settlers did not stop at the Mississippi River. They moved on into Arkansas, Louisiana, and Texas, until the South was one region from Virginia and Kentucky to the Gulf of Mexico. Planters built their fine homes here, for they had come to stay. They had brought their slaves with them; and they were soon raising the fine cotton, rice, sugar, and tobacco, for which the South is famous.

THE STORY OF COTTON

The story of the Old South is the story of cotton. In the early days leather, wool, and linen were the materials most used for clothing. Woolen clothing was used from the first, for many of the first settlers brought with them the sheep they were so used to raising in England. The flax from which the women wove the fine linens was grown in the gardens. Sometimes wool and linen were woven together, and this cloth was known as "linsey-woolsey." The people did not have any of the fine cotton, calicoes, muslins, and ginghams that we have today.



Fig. 362. This picture shows cotton blossoms, cotton bolls ready to burst open, and cotton ready to be picked.

Where cotton came from. The story of cotton is so old that no one knows exactly where cotton first came from or when it was first woven into cloth. We know it was grown in China thousands of years ago. Beautiful fabrics were made of it because it could be dyed so easily with rich and delicate colors. So rare and beautiful was this wonderful cloth made from cotton that only kings and rich men could afford to use it. Wonderful stories were told about the strange plant from which such fine cloth was made. One great traveler and explorer who had been in China said that cotton came from little lambs that grew in pods on trees. The people of India, too, learned to spin and weave cotton into beautiful cloth; our calico takes its name from the city of Calicut, India. The name muslin comes from Mosul, a city in western Asia on the Tigris River.

Fine cotton cloth was one of the things that Columbus hoped to get when he sailed west to find India. We can imagine how delighted he was when he found the natives of the West Indies wearing cotton garments. He was sure that he had at last reached India, the land of cotton. Although he had not reached India, he had discovered the new land that was to become the greatest cotton country in the world. The Spanish explorers found the Mexicans wearing fine cotton clothes, and in Peru they found a brown cotton.

Nowadays, instead of being the cloth for kings, cotton is king of cloth. It is used the whole world over by rich and poor. Sometimes it is made into cloth so fine that it can hardly be told from silk. And it may be made so thick

and heavy that it is mistaken for wool. If cotton should suddenly be taken out of the world, we would have a hard time finding enough material to make our clothing.

If we should go to a cotton field, pick a handful of cotton from the boll, and pull it loose from the seeds, we should see that it is made up of very fine, silky, hair-like fibers. The fibers are usually less than an inch long, though they may be as much as two inches in length. If we lay two of the fibers together and twist them, they will stick together and form a thread. It was easy enough for the old settlers to make the fibers into cotton thread, but it was hard for them to get the fibers ready to spin; the tiny brown seeds stuck so tightly to the fluffy fiber. Think of having to pick out all the seeds by hand, one by one, before you could begin to make thread. That was just what had to be done.

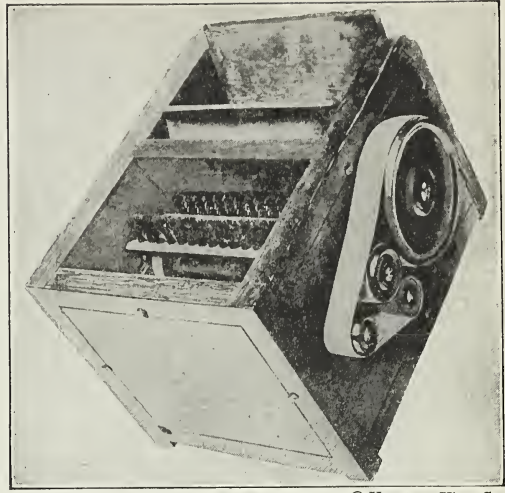
It usually took a man a whole day to pick the seeds from one pound of cotton fiber or lint.

During the War for Independence the people could not get clothes from England; and they would not if they could. So the women did more spinning and weaving than ever before. Prizes were offered for the best work, and many of the women spun and wove from morning till night. A story is told that when Washington was inaugurated as the first President of the United States, the clothing he wore had all been made in this country.

WHITNEY AND THE COTTON GIN

Eli Whitney. But the old spinning wheel could not spin thread fast enough to supply the needs of the people; it made only one thread at a time. Finally someone in England invented the "spinning jenny," a machine on which many threads could be spun. About this time the cloth-makers learned to use water power for running the looms, the machines that weave the threads into cloth. More and more cotton was needed, but the work of separating the seed from the lint was so slow that the mills could not get nearly enough clean cotton to keep them running. Then a young man, Eli Whitney, came to the rescue. Whitney was born in Massachusetts about ten years before the battle of Bunker Hill. His father had a workshop, and young Eli learned to use all the tools in the shop. By the time he was twelve years old, he was earning money by repairing violins, and had made a violin for himself. He also became a skilful iron-worker, and made nails, tools, pins, and knives for the neighbors. He even worked his way through college by making articles for the other students.

Young Whitney wished to study law, but did not have the money; so he decided to teach school for a time. A place in a school in Georgia was offered him, and he set out by ship for the South. On the ship he met Mrs. Greene, the widow of General Greene, who lived in Georgia. Mrs. Greene liked the



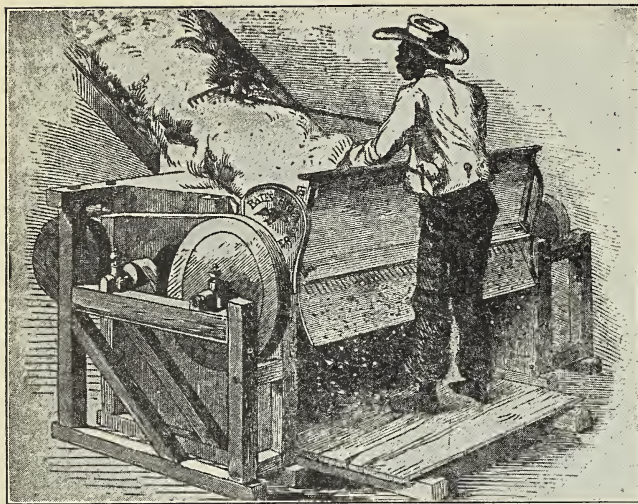
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Fig. 363. The cotton gin that Eli Whitney built. The cotton gins of today are of course great machines that look nothing like this, but they started from this little machine of Whitney's.

young teacher very much. When Eli reached Georgia, he learned that another man was already teaching the school. He found Mrs. Greene, told her his troubles, and she invited him to stay at her home until he found work.

Whitney invents the cotton gin. One day several old soldiers and planters came to visit Mrs. Greene, and they soon fell to talking about cotton raising. They all agreed that every planter could make money out of cotton if only a machine could be had that would pull the lint from the seeds. "You must meet Mr. Whitney," exclaimed Mrs. Greene. "Perhaps he can help you. He can do almost anything. Just see this embroidery frame that he made for me."

Young Whitney learned what the cotton growers needed and went to work. Day after day he worked away in a little room all alone. And then one day when he had finished his task, he called Mrs. Greene and a few others into his room and showed them his new machine. He poured into the hopper some cotton just as it came from the field. To the surprise of all, the little brown seeds came out on one side, and the soft cotton lint came out



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Fig. 364. It would have taken many men to pick the seeds from the cotton that this early cotton-gin could handle in one day.

on the other. Eli Whitney had invented a cotton engine. Soon it came to be called a cotton gin, the word "engine" being shortened to "gin."

Now with the new machine to separate the seeds from the lint, the farmers could plant hundreds and thousands of acres of cotton. When Whitney invented the gin, our country was growing about 3000 bales of cotton. Five years later we were growing 73,000 bales. Great plantations were cleared and hundreds of workers were needed; therefore many slaves were brought from Africa and sold for high prices. During the next fifty years the growing of cotton and the building of plantations spread throughout the South. The rich soil, plenty of rain at the right time, a hot climate, and a long season without frost made conditions just right. The planters said that cotton was king because the South was the only part of the world that could grow enough cotton for the mills of Europe and America. Up to this time most of the cotton had come from India and China.

Differences between the South and the North. Most of the people of the South lived

on plantations, large and small, many of them like those we read about in the story of Virginia. Cotton, instead of tobacco, was the chief crop which they sold. There were very few large towns then, and almost no factories. The cotton was sold in the eastern states and in Europe, and the money was spent for fine clothing, luxuries, and choice foods that could not be grown on the plantations.

Conditions were very different in the North. The farmers in the North lived on small farms, as compared with the big plantations of the South. On the northern farm the farmer and his sons did the work. They might hire a

neighbor boy or two, or have a hired-man, to help with the work during harvest time. There were many large towns and cities and many factories.

Almost from the beginning the people in the North and the people in the South were different. The settlers in the North lived in towns or on small farms close together. In New England it was hard to make a living by farming because the soil was thin and rocky and the winters were long. Therefore the Northerners had to earn a living by fishing, trading, and manufacturing. In the South life was easier. The soil was rich and the climate was mild. The planters could make a good living from their crops. Towns were small and grew slowly; the people were scattered over the country, living on their plantations. There was little manufacturing. As the work was suited to slaves, and as they could be bought easily, the white men did not have to work as hard as they did elsewhere.

When slaves were first brought to America, they were sold in both North and South. But they could not be used so well in the North, and it did not pay the northern farmer to buy

them. The Negro did not like the cold northern climate; he liked the hot sun of the South. He was too ignorant to learn to work in the factories. The white man could work well on the farms in the North, but it was too hot for him to do the hard work in the cotton fields of the South.

The people of the two sections hardly knew each other. In those days it was not easy to travel from one section to the other. Very few people moved from the North to the South or from the South to the North. When settlers did move from New England or New York, they traveled over the mountains into the new West rather than into the South. Even the first railroads that were built ran from the East to the West and not from the North to the South. Because the people in the two sections were almost strangers to each other, those in one place heard and believed queer things about the ones in the other. It is easy to believe bad things about the people we do not know.

The feeling against slavery. People all over the country, even in the South, thought that slavery was wrong, and some of the planters freed their slaves. However, this



By Ewing Galloway, N. Y.

Fig. 365. A beautiful home of plantation days in Louisiana

feeling was strongest in the North where there were so few slaves. People took sides and argued the question for and against. Because of this feeling, the people who wanted to have the slaves freed formed themselves into societies to abolish, or do away with, slavery. They were known as Abolitionists. The Abolitionists worked against slavery, wrote against it, and talked against it whenever and wherever they could.

As time went on, people all over the country became more and more excited over the slavery question. William Lloyd Garrison of Massachusetts was mobbed and his printing office ruined because in his newspaper he wrote such hard things about the slave owners.

For forty years the North and the South quarreled over the question of freeing the slaves, until finally the Southern states began to talk about leaving the Union—the United States—and starting a new nation of their own. These were troublesome times. Perhaps these United States of America that had started out so bravely as a new nation only about seventy years before would never be able to stay united.



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Fig. 366. These slave huts of plantation days may still be seen on the Hermitage plantation near Savannah, Georgia.

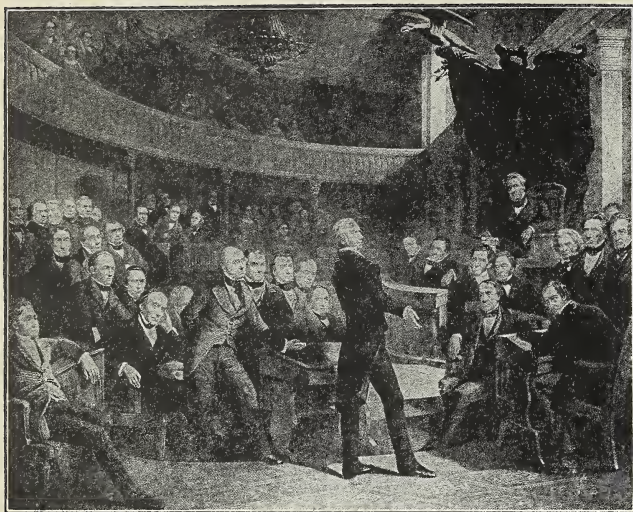


Fig. 367. Henry Clay pleading in the Senate for peace between the North and the South. The man sitting behind Clay with his hand at the side of his face is Daniel Webster.

The story of those forty years is a long one, too long for us to try to learn it all. But there are three great statesmen of that time that we should remember: John C. Calhoun, from South Carolina, who believed in his state and in slavery; Daniel Webster, the mighty orator from New England, who said in his greatest speech "Liberty and Union, now and forever, one and inseparable"; and Henry Clay from Kentucky, the peacemaker who at three different times managed to keep the two sections from separating. In the Congress at Washington senators and congressmen took part in many a long and bitter debate over the questions of slavery and of whether a state had the right to leave the Union of states, formed when we won our freedom.

The Fugitive Slave Law. The Abolitionists encouraged slaves to run away from their masters; then when these runaway slaves came to the North, the Abolitionists helped them to hide or to cross into Canada so that their owners could not find them. Of course, the people of the South were very angry at this and thought the Abolitionists were wrong in helping the slaves to get away.

"The slaves are ours," they said. "When they run away and you find them, you should return them to us just as you would return any other property that you might find."

Congress then passed what was called the Fugitive Slave Law. This ruled that officers everywhere in the United States should help to catch runaway slaves and send them back to their masters, and that anyone who helped the slaves should be punished. The United States Court also ruled that the owners of slaves might take them into the free states and still hold them as slaves. That meant that slavery might exist in any part of the country even

though the people might not want it. In spite of the Fugitive Slave Law, people in the North helped slaves to escape, and there was greater bitterness than ever between the North and the South.

QUESTIONS TO ANSWER

1. What are our South Central states? From where did the people come who settled them? What rivers did they use? 2. Who first explored these states? What people made the most settlements before the Americans came? 3. Why did the Americans leave the plantations along the Atlantic and settle in the South Central states?

4. From what continent did the first cotton come? 5. How do we know that the Indians raised cotton? 6. Explain how a war caused more cotton to be raised and cotton cloth made in this country. 7. What inventions made it possible to use more cotton? Which one was worth more to the Southern planters? 8. What effect did the invention of the cotton gin have on the price of slaves?

9. Explain how it came that most of the slaves were in the South. 10. Why did not the people of the North and the South know each other better? What things made the people different? 11. How did the people who were against slavery try to stop it? What were they called?



Courtesy U. S. Army Signal Corps

Fig. 368. Throughout our country there were scenes like this as the Boys in Blue from the North and the Boys in Gray from the South marched away to the camps and battlefields. They both thought the war would be over in a short time, but it was four years before they came home.

THE WAR BETWEEN THE STATES

THE UNION IS BROKEN

Lincoln elected President. As we have already learned, there was bitter feeling between the North and South over slavery and over the question of whether the Southern states had the right to leave the Union and form a nation of their own. Finally the two sections became so angry with each other that they were ready to fight. When the Republican Party elected Abraham Lincoln President of the United States in 1860, the Southern people thought they could not stay in the Union any longer. The leaders of the Republican Party had said that slaves should not be taken into free states, that slavery was wrong, and that all slaves should be set free in some way. "This nation must be either all slave or all free," said Lincoln. "A nation divided against itself cannot live."

The Southern people thought that Lincoln wanted to take their slaves away from them. They said: "Even if we should free our slaves, we would not know what to do with them. We would have to care for them because they do not know how to care for themselves. Besides, we could not raise cotton; and the whole country looks to the South for cotton. You people of the North have no right to say whether we shall have slaves; each state should decide for itself.

We will withdraw from the United States and have our own government." President Lincoln said: "We must keep the Union together. If you try to leave, we will fight you."

The Southern states leave the Union. But the Southern states felt that they had every right to leave the Union if they wished to do so. In December, 1860, South Carolina declared itself no longer a part of the United States. By June of 1861, Mississippi, Florida, Alabama, Georgia, Louisiana, Texas, Virginia, Arkansas, North Carolina, and Tennessee followed. These states formed a new government, called the "Confederate States of America." Jefferson Davis was elected President, and Montgomery, Ala., was made the capital. The War Between the States began. The people of the North were called Federals; those of the South, Confederates.

The Southern people believed that they could win the war, because they raised the cotton that the factories of the North needed. "Cotton is king," they said, "and the people of factory cities will not dare to join in a fight against us. The people of Europe will help us, for they too must have cotton." There were twice as many people in the North as there were in the South, but the Southern people thought that those who lived in the Northern cities would not make good soldiers. At that



By Ewing Galloway, N. Y.

Fig. 369. On a mountain of stone near Atlanta, Georgia, the people of the South plan to make a great carving in memory of the soldiers of the Confederate Army. These are the three central figures: Jefferson Davis, Robert E. Lee, and last, "Stonewall" Jackson, one of Lee's best generals.

time nearly all of the officers in the United States army were Southern men. The South did not think the North could train officers quickly enough to drill and lead her soldiers. Neither side even dreamed that the fighting would go on for four terrible years.

On both the Northern and Southern sides there were fine, brave men—men who became famous during the war. We can only take time to tell about two of the most famous—Abraham Lincoln and Robert E. Lee.

ROBERT E. LEE

Lee's boyhood. Robert E. Lee was born in the same county in Virginia in which George Washington was born. Robert's father was Henry Lee, who had been such a dashing cavalry leader with Washington in the War for Independence that he was nicknamed "Light-Horse Harry Lee." He told Robert many stories of the Father of Our Country. Washington was such a hero to

Robert that he tried to make his life like Washington's. You remember that Washington's father died when George was eleven years old; so he had to be his mother's helper. The same thing happened to Robert Lee. When Robert was eleven years old, his father died; since his mother was not well, he had to be her helper. He often told his comrades that his mother was his best friend. She was firm but gentle, and taught Robert to be kind, truthful, and brave.

Lee's education. Lee was sent to good schools and to college. When he was nineteen years old, he went to West Point to learn to be a soldier. Both his father and George Washington, his hero, had been soldiers. Robert was a good student and stood second in his class. He was a handsome young man and was liked by the other students. Because he stood so high in his studies, he was allowed to choose the kind of work he wanted to do in the army. He chose to have charge

of building forts and roads; so he was made a lieutenant of engineers.

Lee's work before the war. Upon his graduation from West Point, Lee was sent to Hampton Roads on Chesapeake Bay near Norfolk to look after the fort there. When he was twenty-five years old, he married Mary Custis, the daughter of Washington's adopted grandson, George Washington Parke Custis. Robert E. Lee and his wife made their home at Arlington, the Custis home, across the Potomac from Washington. St. Louis was the next place to which the government sent Lee. When he had finished his work there, he was sent to New York to look after the forts at that city. Soon after this the United States went to war with Mexico, as you will learn later. Captain Lee took part in this war, and so well did he do that his commander reported him to be the finest army man in America. After the Mexican War Lee was made Superintendent of the U. S. Military Academy at West Point. Later he went to Texas to fight Indians.

The leader of the South. When the War between the States broke out, President Lincoln called Lee to Washington and asked him to take command of the Northern army. It was hard for Lee to refuse. He loved the Union; he had worked and fought under the Stars and Stripes for thirty years. But he said, "How can I fight against my state, my relatives, my children, and my home?" Robert E. Lee always did what he thought was his duty. He was sorry that his state should leave the Union, but since she had done so, he said, it was his duty to fight for his state. He once wrote to his son, "Duty is the sublimest word in the English language." Robert E. Lee became the great military leader of the South.

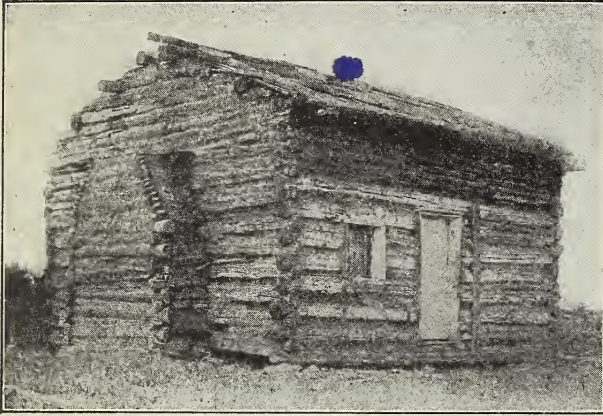


Fig. 370. General Lee on his favorite horse, Traveler

ABRAHAM LINCOLN

Lincoln's birth. Let us imagine what might have happened on the morning of February 12, 1809. Thomas Lincoln probably went to tell Betsy Sparrow, his wife's aunt, about the new baby boy who had come to live with them. Perhaps Dennis Hanks, Mrs. Lincoln's cousin, came running to get the first peep at his new cousin, and asked the baby's mother what she was going to name him. "Abraham, after his grandfather," was the answer. It is told that Dennis asked if he might hold the baby awhile; but he had no sooner taken his cousin into his arms than it screwed up its mouth and began to cry. "Here, take him!" Dennis said, handing the baby to his Aunt Betsy. "He'll never come to much!"

Tom Lincoln was a farmer and a carpenter, who had cleared some land and settled near Hodgenville, Kentucky. He was an honest man, but he did not work hard enough to make much money. Abraham's mother, Nancy Hanks Lincoln, seems to have been a gentle woman, who loved the birds, the flowers, and the trees; and she taught Abraham about the things she loved. She told him the story of Abraham of the Bible; and



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Fig. 371. This little cabin in which Lincoln was born has been covered with a fine building so that it may be kept in his memory.

of David, and Solomon, and Jonah. She taught him to be kind to people and to animals, and to tell the truth.

Lincoln's first home. Abraham Lincoln's first home, near Hodgenville, Kentucky, was not a cozy one (Fig. 371). The floor was of packed dirt, and the rough slab door of the house hung loosely on leather hinges. There was one small window through which the father, the mother, Abraham, and his little sister Sarah could look out upon the trees and the birds, the rain and the snow, and the sun and the clouds. A big fireplace almost filled one end of the house, and a chimney of clay and sticks carried the smoke up and away from it. Rude beds made of poles filled one side of the room. One end of each pole was stuck into cracks between the logs, and the other end rested on a crotched stick that had been driven into the dirt floor. Bearskins were stretched across the poles, and upon these the family slept. Bearskins were used also for blankets. A table was built against the wall on the other side of the room. Three-legged stools with seats that had been chopped from logs and cut smooth by hand took the place of chairs.

Wild crab-apple trees grew near the house, and around it were little cleared fields on

which the father raised the food for the family. Woods gave charm to the spot, and beautiful hills rolled away in the distance. For a short time Abe and his sister Sarah went to the Knob Creek school, four miles from their home. It was called a blab school because the pupils studied their lessons aloud. At this school Abe learned his A-B-C's, to write his name, and to count.

Lincoln's mother dies. When Abe was seven years old, the family moved to the southern part of Indiana and built a new home. The little boy did his part, but the work was hard for him. Then, when he

was nine years old, his gentle mother became ill and died. Thomas Lincoln made a coffin of rough planks for his wife, and buried her in one corner of the little clearing. We can imagine that the days were long and lonely for Abe and Sarah. Several months after the mother was buried, a preacher stopped at the cabin, and it is said that Abe asked him to preach a funeral sermon for his mother. Years later, when Abraham Lincoln had become famous, he said: "All that I am or hope to be, I owe to my angel mother."

Lincoln's new mother. A year later the father went back to Kentucky to look for a wife to care for his children. We can imagine that, late one afternoon, Sarah sat on the doorstep while Abe leaned against the side of the house. Probably neither spoke a word, for they were lonely and sad. Abe was tall, thin, and barefoot. His trousers were ragged and too short. His eyes were large and dreamy, his face thin and dark. He may have been wondering whether a new mother could take the place of his own mother who had died. And then over in the clearing the children saw a wagon drawn by four horses coming toward the house. Their father was driving, and a strange woman sat

on the seat beside him. The father stopped the horses in front of the house, climbed out, and helped the woman down from the high seat. The children knew as soon as they saw her that she would be kind to them, for there was a smile on her lips and kindness shone from her eyes. Sarah Bush Lincoln had brought her own three small children with her. Now the cabin would be crowded, but it would be more comfortable, for the new mother had brought beds, pillows, and furniture with her. The day after she came, she set Mr. Lincoln to work fixing up the cabin to make it more comfortable. Before winter came there was a floor in it, and chairs took the place of stools.

Lincoln's love of books. Schools were scarce then, and very poor. Abe never went to school more than a year in his life, but his stepmother helped him to get books to study at home. Most of Abe's friends and relatives thought he was queer. They could not understand his fondness for books. A cousin, John Hanks, said of him, "When Abe and I came in from work, he would snatch a piece of corn-bread, grab a book, sit down, cock his feet up as high as his head, and read." Books meant more to Abe than they did to most people. He was eager to learn all he could. When he came across a hard word, he would write it down, find out what it meant, and study it.

A trip to New Orleans. When Abe was twenty-one, the family moved again—this time to Illinois, on the Sangamon River near where Decatur now stands. The next year Abe was hired to build and run a flatboat down the river to New Orleans. He was paid about fifty cents a day. The boat was loaded with pork and grain. It was in New Orleans that Abe first saw slaves put up and sold to the man who would pay the most for them. It is told that as Abe turned away from the scene, he said, speaking of slavery, "If I ever get a chance to hit that thing, I will hit it hard."

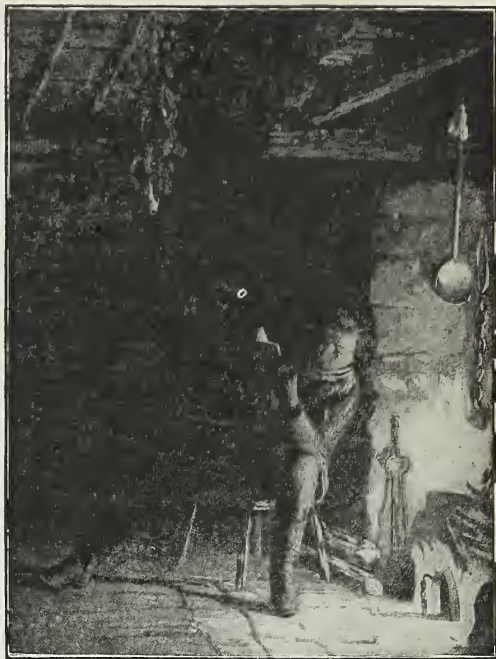


Fig. 372. Lincoln was a great lover of books.

After his trip down the river Abe became a clerk in a store. The story is told that one day he found he had charged a woman six cents too much, and he walked three miles to her house to pay back the money. He was nicknamed "Honest Abe" because he was honest in every detail.

Lincoln the lawyer. Lincoln was clerking in the store at the time the Indian chief, Black Hawk, went on the warpath. A company of soldiers from Abe's part of the country were going to fight in this war, and they chose Abe as their captain. His company did very little fighting, but Abe made many friends and became famous as a story-teller. After a few years of doing all sorts of work, reading all the law books he could find, and making more friends all the time, Abe was elected to the state legislature. He was still so poor that he had to borrow two hundred dollars from a friend to pay for new clothes and for his first expenses in the capital.



Courtesy Rollin Kirby and Colliers

Fig. 373. Lincoln comes to town on his business as a lawyer.

Lincoln had been studying law for two or three years, and he was now ready to be a lawyer. His partner in the law office in Springfield was a very good lawyer, and he and Lincoln became well-known throughout Illinois. Even while Lincoln was practicing law, he was interested in politics, and he was known for his stand against slavery and for his views on other problems of the day. After some years in Springfield he was elected to Congress for two years.

Lincoln elected President. In 1860 Lincoln was elected President of the United States. The poor boy from the little log cabin had been made the leader of his nation, and he faced the biggest job of his life. People all over the country, especially in the South, were more excited over slavery than ever. Seven of the Southern states had

seceded from, or left, the Union before Lincoln went to Washington to become President. Four more Southern states soon followed. In his speech when he became President, Lincoln said to the Southern people: "We are not enemies, but friends; we must not be enemies. . . . You have no oath registered in Heaven to destroy the Union, while I have a most solemn one to preserve, protect, and defend it." Lincoln, like many others in both the North and the South, hoped that some way could be found to keep the states together, and that there would be no war.

THE WAR BEGINS

Surrender of Fort Sumter. On the morning of April 12, 1861, the first fighting of the long and bloody War between the States occurred when the Confederates bombarded Fort Sumter, on an island in Charleston harbor. The Federal troops there were forced to surrender; and the war had begun.

Federal plans for the war. The Southern people had been preparing for defense so that the Federals could be kept out of the South. Forts had been built at nearly every city along the coast from Norfolk to Galveston, and all along the boundary between the North and the South from Virginia to the Mississippi River. There were also forts along the Mississippi to keep the Federals from using that river. President Lincoln decided that the Federals must do four things: First, they must shut the front doors of the South, that is, block all the Southern ports; second, take the Mississippi River and thus cut the South off from the West; third, break the line of forts between the North and the South so that they could march into the South; fourth, capture Richmond, the capital of the Confederate states.

Blocking the Southern ports. The South expected to be able to sell her cotton to Europe just as she had done for years; this would give her money to carry on the war. England would have been glad to buy most of the cotton and to send ships across the ocean to get it. But President Lincoln ordered a blockade of all the Southern ports; that is, he ordered warships to stay just outside the ports and to capture any vessels that might try to go either in or out of the harbors. At first the Federals did not have enough gunboats to guard all the ports. But they did have shipyards; and they built boats so fast that before the close of the war, it was almost impossible for a vessel to get into or out of a Southern port.

The Southern people could not break the blockade, for they had few warships and hardly any shipyards. Cotton stood in great piles, and actually rotted, on the wharves. The price went so low that it could be bought in Charleston for four cents a pound, while it would have sold for more than a dollar a pound in England. Goods from Europe that the South needed grew higher and higher in price. A ton of salt, usually worth less than ten dollars, brought nearly \$2000; a fine dress cost about \$1000; a yard of calico, \$10; and a pair of shoes, \$150. The soldiers and people put wooden soles on their shoes. The South had very few factories, and of course she could not build any while she was at war. So you can see how the blockade of the ports helped the North to win the war.

Opening the Mississippi River. Lincoln and his generals planned to open the Mis-



Fig. 374. To break the blockade at the mouth of Chesapeake Bay, the Confederates re-built a ship named the *Merrimac*, covering it with iron. The Federal gunboats were helpless, and two were sunk the first day. The next day a queer looking Federal boat, the *Monitor*, also iron-covered, came out against the *Merrimac*. Someone said it looked like a round cheese box on a raft. For four hours the battle went on. Neither ship could sink the other. Finally the *Merrimac's* engine broke down, some of the iron plates became loose, and it withdrew to the navy yard at Norfolk. This was the first battle in history between iron-covered boats.

issippi River to Northern boats by capturing all the forts along that waterway. This would keep the Confederates from getting meat and other supplies from Texas, Louisiana, and Arkansas. With an army and gunboats General U. S. Grant took Forts Henry and Donelson on the Tennessee and Cumberland rivers. Then the gunboats steamed down the Mississippi and after a time captured all the forts as far south as Vicksburg. Admiral Farragut, a Federal, came up the Mississippi to New Orleans and captured that city. General Grant now took an army down the west side of the Mississippi River, crossed over to Vicksburg, and for six weeks bombarded the city. The people left their houses and lived in caves dug in the hills. Finally,



Fig. 375. Admiral Farragut



Courtesy U. S. Army Signal Corps

Fig. 376. General U. S. Grant. In the third year of the war President Lincoln made him commander-in-chief of the Federal army. After the war he became President of the United States.

when food became so scarce that they were starving and their ammunition was gone, the Confederates surrendered the city to General Grant. The Mississippi River was now open to the Federals, and the Confederate states were cut in two.

Breaking the line of forts. Many hard battles had been fought in Tennessee and Kentucky during the time that the Federals were opening the Mississippi River. Sometimes the Federals won, and sometimes the Confederates. After a terrible battle near Chattanooga, the Federal army was shut up in that city. It looked as though they would surely have to surrender, for food and ammunition were becoming scarce. But General Grant, who had been placed in command of all the Federal armies of the West, came to the rescue just in time. He brought his army with him from Vicksburg, and after a hard battle defeated the Confederate General Bragg, and drove him out of Chattanooga.

General Sherman now took command of the Federal army. Starting from near Chattanooga, Tennessee, he drove the Confederates into Georgia and captured Atlanta, although it took four months and many hard battles. He destroyed the Confederate war supplies and government buildings in Atlanta and began his famous march through Georgia. On this march he destroyed everything in his path that might be of any use to the Confederate army. Wherever his army passed, the country was left in ruins. He reached Savannah on Christmas day, 1864. Again the Confederacy was cut in two. Then Sherman started north and marched as far as Goldsboro, North Carolina, where we will leave him for a time.

Taking Richmond. Since the beginning of the war, the Federals had been trying to take Richmond which had been made the capital of the Confederacy. A little story is told about Lincoln, which shows that the taking of that city was not an easy task. One day a gentleman came to Lincoln and asked for a pass permitting him to go to Richmond. Lincoln said: "Yes, I will give you a pass, but I am afraid it will not do you much good. I have given passes to Richmond to 250,000 soldiers, and not one of them has got there yet."

The first year of the war, President Lincoln put General George B. McClellan in command. McClellan got within seven miles of Richmond, but General Robert E. Lee drove him back. The next year General Lee decided to invade the North. He marched into Maryland, where McClellan overtook him at Antietam Creek, a few miles south of Hagerstown. Here a terrible battle was fought, and Lee had to go back to Virginia.

After the battle of Antietam President Lincoln issued what is known as the Emancipation Proclamation. This was simply an order to free all slaves in all the Southern states. Of course President Lincoln could not make this a law, but after the war was over, Congress made it a law of the United States.



From a painting in the state capitol, Dover, Delaware

Fig. 377. An artist painted this meeting of Grant and Lee, but they really met in a house at Appomattox.

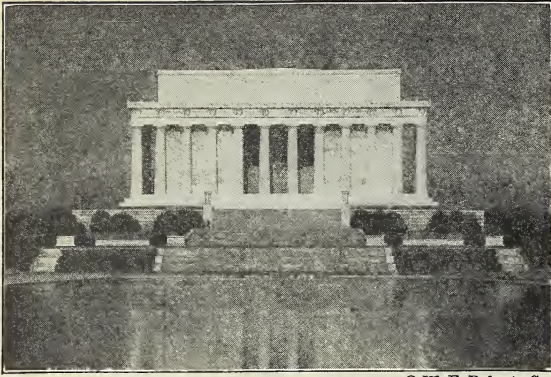
You remember what Lincoln said when he saw the slaves sold in New Orleans: "If I ever get a chance at that thing, I will hit it hard." Now his chance had come, and he hit slavery so hard that he killed it.

The third year of the war General Lee marched into the North again. This time he got as far as Gettysburg, Pennsylvania. At this place the two armies fought terrible battles for three days, but General Lee could not break through the Federal lines. He turned back to Virginia for the last time.

General Grant was now placed in command of all the Federal armies. He made the capture of Richmond his one big task. So great did the task prove to be, that it took him nearly a year to finish it. Grant's army grew larger and larger all the time, for President Lincoln sent him more and more soldiers. On the other hand, General Lee's army grew smaller all the time, because in the South there were no more soldiers to be had. Then, too, the Federal army had plenty of food and other supplies, while General Lee's army was hungry and ragged. Finally, Lee and his brave men saw that they could not hold Richmond any longer; so they made plans to withdraw the army from the city.

The end of the war. One Sunday morning as President Davis sat in church, a messenger hurriedly handed him a note from General Lee, saying that he and his army were then leaving Richmond. Lee hoped to slip out of Richmond and join General Johnston in Carolina. But it was of no use. Grant's men had surrounded his army, and there were too many of them for Lee to hope to defeat. The two generals met at Appomattox, near Lexington, Virginia, on April 9, 1865. Here General Lee surrendered his army to General Grant.

After his meeting with General Grant, General Lee mounted his war horse, old Traveller, and rode before his men. "Men," he said, "we have fought together through the war. I have done the best I could for you. My heart is too full to say more"; then he rode away. Grant ordered Lee's hungry men to be fed, gave them their horses, and they started on their long, weary journeys to their broken homes. A short time later General Johnston surrendered his army to General Sherman at Goldsboro, North Carolina, and the long war between the states was over. In the war over 700,000 men had lost their lives, and over 5000 millions of dollars had



© W. F. Roberts Co.

Fig. 378. In Washington, our capital city, is this beautiful building in memory of Abraham Lincoln.

been spent. Besides all this, there were the ruined plantations of the South and the sorrow of people on both sides who had lost father, or son, or brother.

President Lincoln killed. The war was over and there was great rejoicing. People built bonfires, fired guns, and rang bells. Both sides were weary of the awful struggle, and they were glad to go to their homes and to be at peace once more.

For days President Lincoln had been busy making plans for taking the Southern states back into the Union. On the night of April 14, 1865, he was very tired and went to the theater to rest from his hard work. While Lincoln was watching the play, John Wilkes Booth, a half-crazy actor, entered the box and shot him. The President was taken to a small house across the street, where loving friends watched beside his bed all night long. In the early morning President Lincoln died. Booth escaped that night, but he was soon captured. People all over the country were shocked and saddened by the news of President Lincoln's death. They had learned to love this backwoods boy who had risen from the humble surroundings of his boyhood to the presidency of the United States. Even the Southern people knew that they had lost a friend. President Lincoln's body was taken back to Springfield and buried there.

Lee's last years. Lee had many opportunities to become rich, but he spent his time helping to re-build the South. He was elected president of Washington University in Lexington, Virginia. Here he had a hard task, for the school had suffered because of the war. For five years he worked hard as president of the university, at the same time always doing his best to soften the bitter feeling between the North and South. After his death the name of the school was changed to Washington and Lee University.

QUESTIONS TO ANSWER

1. Locate the states that left the Union. How do they compare with the cotton states?
2. Which side had the most men and the most money?
3. Can you show on the map the four plans by which the Federals hoped to win the war?
4. Which plan did most to win?
5. Explain how it hurt the Confederacy for the Federals to hold all the forts along the Mississippi River.
6. Where did the Federals make the second break into the South? What Federal general then marched across the Confederacy? What state did he cross?
7. Locate the seaports along the coast from Norfolk to Galveston from which the Confederates might have shipped cotton.

THINGS TO DO

On an outline map of the Southern states make a gunboat, or something to represent one, on the sea just outside each port. Draw a line down the Mississippi River from the Ohio to New Orleans and make crosses where the Federals must have taken forts; draw a line over the route that General Sherman followed across the South. Draw and label the two routes that General Lee followed to the North.

Books to read: Beard and Bagley, *First Book in American History*, pp. 265-318; Bourne and Benton, *The Story of America and Great Americans*, pp. 244-269; Coe, *Makers of the Nation*, pp. 190-197; Davidson, *Founders and Builders of Our Nation*, pp. 137-144, 179-213; Logie, *From Columbus to Lincoln*, pp. 196-262; Nicolay, *Boy's Life of Lincoln*, entire; Woodburn and Moran, *The Makers of America*, pp. 181-188, 249-296.



Fig. 379. Negro "share-croppers" in Arkansas working in the cotton field

James Sawders

THE COTTON BELT TODAY

GROWING AND SELLING COTTON

Hard times after the war. At the end of the war both the planters and the freed slaves had new problems. Many of the plantation owners were now poor and had no money with which to pay wages. They could give food, shelter, and clothing in exchange for work, but many of the Negroes wanted money for their work. Thousands of the freed slaves left the plantations and went to the cities. But there were not jobs enough to go round, and many of the Negroes were without proper food or decent places to live.

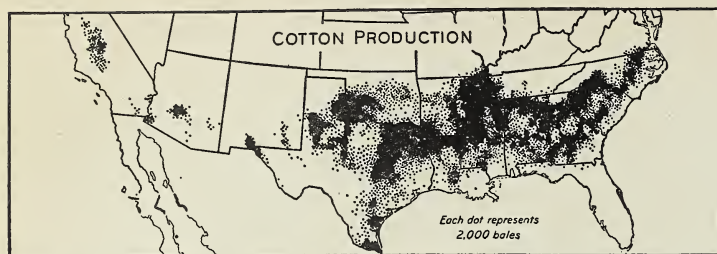
Those who rented or bought land from the planters were a little better off. But they had not been trained to manage their own farms. They did not know how to plan the work or how to save money until the next crop was sold. They had been fed and cared for and told what to do so long that they could not now plan for themselves.

The planters had a hard time, too. They could not pay the debts of the war. Many of them had to sell their plantations a little at a time. Some went to the cities to live and left their plantations idle. The South seemed ruined. But gradually a new system grew up which is still being used today.

A cotton plantation. Since the old plantations were broken up, much of the cotton has been raised on small farms. But in the last few years many large plantations have grown up. Let us visit an imaginary friend, Mr. Hale, in Texas, and see how cotton is raised on his 800-acre plantation. Mr. Hale rents half his land to Negroes, Mexicans, and white workers. They pay part of the crop they raise as rent; so they are called "share-croppers." Each renter works about twenty-five acres, which is as much land as one family can care for. Mr. Hale furnishes the mules, the tools, the seed, and sometimes the food for the renter and his family. In return he receives about one-half the cotton raised.

Sometimes the owner rents his land to Negroes or white workers who furnish their own teams, tools, and food. They are called tenants. Tenants usually pay one-third or one-fourth of their crop as rent.

Mr. Hale furnishes the houses for the renters and for his own helpers. The renters have gardens which furnish part of their food and corn for the live stock. Mr. Hale works the rest of his land with his own helpers. Good farmers in this section have learned it is wise to raise other crops besides cotton.



U. S. Department of Agriculture

Fig. 380. Where cotton is grown. Can you start at the right of the map and name all the states? Look at Fig. 179, page 114. Do you see why Savannah, Georgia, and Galveston, Texas, are such great cotton-shipping ports?

Then if the cotton does not do well, or if the price is low, they have something else to sell.

Kinds of cotton. The finest cotton in the world grows on the islands off the coast of Carolina and Georgia; sea-island cotton it is called. The fibers are long, fine, and as soft as silk. The cotton grown on the rich river-bottom lands of the Southern states has a long fiber, too; but not quite so long, nor so fine, as the sea-island cotton. It is known as long staple cotton. The cotton raised on the rolling lands just back from the lowlands is of medium-length fiber, and is called medium staple. The cotton grown on the uplands has a short fiber, and is known as short staple.

Growing the cotton. The planter watches the weather closely. Cotton must have water, hot weather, and a long season of warmth. In the spring plenty of rain is needed to start the plants growing. While they are growing in the summer, light showers are welcome. When the cotton is ripening, it should have dry weather, or very little rain. Cotton must have five or six months of warm or hot weather without frost. Sometimes heavy rains, or even floods, come at the wrong time. Too much rain either makes the crop small or ruins it entirely.

Early in the spring, often as early as February, all hands begin plowing the fields. In

March or April the soil is thrown up in slightly raised beds about three feet apart. On the beds the seed is planted with a machine like a corn planter. It is sown thickly to make sure that enough plants will come up. Some of the seeds may not sprout.

As soon as the green shoots have grown a few inches above the ground, the worker and his mule begin to cultivate the ground to keep weeds and grass from growing and to keep the soil loose and light. Tractors are used on some of the more up-to-date plantations. As soon as the cultivating begins, the boys, girls, men, and the women, walk up and down the rows with hoes and chop out all the extra plants. This is done so that the plants that are left will have plenty of room to grow. By the time the whole field has been cultivated, it is time to go over it again. Again the women and children follow the rows and pull or hoe out the weeds and grass that the cultivator missed. After July the cotton is no longer cultivated.

When the cotton plant is from ten to fifteen inches high, the bud, which is called the square, opens and the flower appears. The flowers are cream-colored at first, sometimes yellow, and look something like hollyhock blossoms. But they soon turn to a delicate pink color. In a few days the petals of the flower fall off, leaving a small green bud, or boll, which holds the seeds and the cotton. The boll grows and grows with the cotton inside until it is about the size of a large walnut. Then, as the boll ripens, it turns brown and becomes hard and dry (Fig. 381).



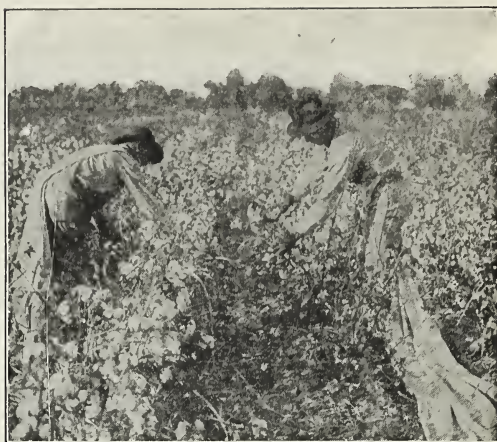
International Harvester Co.

Fig. 381. Cotton bolls before and after bursting

Picking the cotton. In August or September the brown bolls begin to burst. They split into four parts, and each little part bends back like the petal of a flower. When the cotton fluffs out, one wonders how the small brown boll ever held it all. It looks like the fluffy white patches of snow that gather on the weeds and bushes during a heavy snow-storm in the North.

The cotton is now ready to pick, and again the whole family must work. The cotton pickers pull the soft white bunches from the dry bolls and put them into long sacks which hang from their shoulders (Fig. 382). The pickers must be careful not to injure the bolls that have not yet ripened. In one way the cotton plant is like the strawberry plant: the fruit does not all ripen at one time. A cotton plant may have blossoms of different colors, green and brown bolls, and fluffs of cotton on it, all at the same time (Fig. 362).

The pickers must go over the field again and again, just as we go over a berry patch. In the evening the cotton that each person has picked is weighed, and he is paid for what he has picked. One person can pick from 150 to 400 pounds of cotton in a day. The cotton-picking season may last until Christmas time, sometimes even later.



U. S. Department of Agriculture

Fig. 382. Can you see the long bags for holding the cotton after it is picked?

"Ginning" the cotton. The cotton is now taken to the gin where it is "ginned"; that is, the seeds are separated from the fibers. The machine that does this work is called a gin, the mill is also called a gin, and the taking out of the seeds is called ginning. After the cotton is ginned, it is pressed into big bundles called bales. These bales are covered with bagging, or coarse cloth, and bound with iron bands, or straps (Fig. 384). Each bale weighs about 500 pounds.

Selling the cotton. The renter sells his cotton before it is ginned or as soon as it is baled, for he needs the money it will bring him. But Mr. Hale does not have to sell his cotton so early; he may store it and wait until he can sell it for a better price. In many sections of the South the cotton farmers have joined together into coöperative marketing associations. The planters in these associations wait to sell their cotton until they can get a good price. The cotton is stored in warehouses owned by the association.



Photo by Coovert

Fig. 383. Bringing cotton to the gin in Arkansas.



Courtesy International Harvester Co.

Fig. 384. A busy day at the town market as the farmers bring in their bales of cotton to be stored in the warehouse or shipped away over the railroads.

At harvest time, from the larger plantations and from the smaller farms one may see countless trucks and wagons piled high with cotton on their way to the nearest town markets. From these smaller towns trains carry the cotton to the larger city markets of the Cotton Belt and to the cotton-mills of New England and of the South. Big ocean steamers carry it from the seaports, such as New Orleans, Mobile, Savannah, and Galveston, to world markets. Cotton is still the great crop of the South, for in no other section of the world can cotton be grown so well as in the Southern states.

By-products of cotton. In the old days, before people knew its value, cotton-seed was burned to get it out of the way. Today the seed is worth about one-seventh as much as the fiber. When the farmer hauls 1500 pounds of cotton to the gin, he takes away about a 500-pound bale of cotton fiber; the cotton seeds which are taken out weigh about 1000 pounds. The farmer sells the 1000 pounds of seed to the cottonseed-oil mill. At the mill is a machine that takes about fifty pounds of fine lint from this seed. The linters, as this fuzzy cotton is called, are used in making rayon, twine, lamp wicks, and other goods. The miller then runs the seed through a machine that takes off the hulls. He usually gets about 500 pounds of hulls from 1000 pounds of seed. He sells the hulls, usually in

100-pound sacks, for feed for cattle. The seed is now ground and run through heavy presses which squeeze out the oil. The best grade of oil is purified and used in place of olive oil and salad-dressing oil. The poorer grade is made into soap, into a kind of lard used in cooking, and other cheap products.

In pressing the oil from the seed, a hard dry cake is left. This is ground into meal which can be sifted like flour. The best grades are ground into a cottonseed flour, which is used by people for making bread and cakes. Most of the meal is shipped to the Northern and Western farmers to be used as feed for the cattle. Cottonseed meal is one of the richest and best foods the farmer can buy for his cattle. The poorer grades are used as a fertilizer for the soil. The stalks of the cotton plant can be made into paper; so you see that no part of the plant need be wasted.

Boll weevil, the cotton enemy. Cotton has one great enemy, the boll weevil. This little weevil, or grub, is the cause of much trouble. The mother is a small, long-billed beetle, which bores a hole in the young cotton boll. In this hole she lays her eggs. When the little weevils hatch out, they begin to eat the cotton boll, and soon spoil it. The planters have tried many ways of getting rid of this pest, but so far all have failed. Sometimes they spray the plants with poison powder to kill the weevils. Airplanes are sometimes

used to spray the powder over the cotton field. The leaves, grass, and weeds in woods near the cotton-fields, where the boll weevils live during the winter, should all be cleared away. The boll weevil has cost the cotton planters millions of dollars every year. In some sections it has become so bad that the farmers have stopped planting cotton. They are growing other crops. Those who still grow cotton also raise cattle and poultry. If the boll weevil destroys the cotton, there are still other crops to sell. In one way the boll weevil has been a help to the farmers of the South. Look at the picture (Fig. 385), and read what is below it.

QUESTIONS TO ANSWER

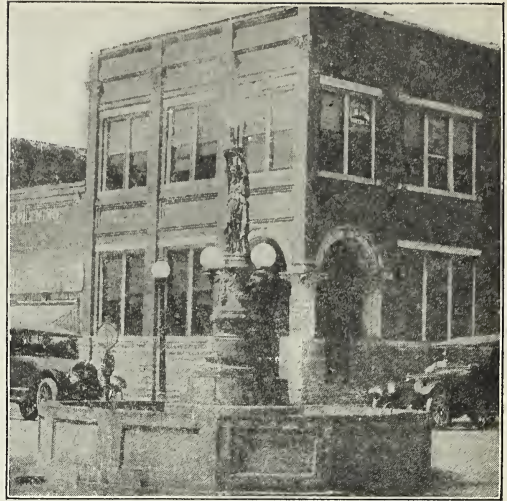
1. What happened to the cotton plantations after the war? Why? 2. What other crop of the South needed many workers? You learned about this back in your study of colonial days. 3. What difference between farming in the North and farming in the South made the Northern farmer better off after the war? 4. Tell how the Southern plantation owner works his land today.

5. Name four kinds of cotton and tell in what kind of region each is grown. 6. What three conditions must cotton have to grow well? 7. Tell the story of a bale of cotton from planting to marketing. What are the by-products of cotton and for what are they used? 8. What little worm has cost the cotton growers millions of dollars? How do the cotton growers fight this evil?

9. Where is the cotton sent to be made into cloth? 10. Do you know any differences between cotton cloth and woolen cloth? Think hard. You ought to know some. If you cannot think of any, ask your mother to tell you. 11. Study the cotton map (page 256) and name the cotton states.

THINGS TO DO

1. On an outline map of the Southern states label the cotton states. Put in four railroads that you know must haul cotton. Show some cities that you know must be cotton markets and cotton-shipping ports. Save your map; in the next few pages you will learn more of these cotton markets and ports, and you will want to add them. Write "long,"



Courtesy Enterprise Chamber of Commerce

Fig. 385. The people of Enterprise, Alabama, raised this statue to the boll weevil. They said that it taught them not to put all their land into cotton, but to grow the other fine crops that do so well in the warm climate and rich soil of the South.

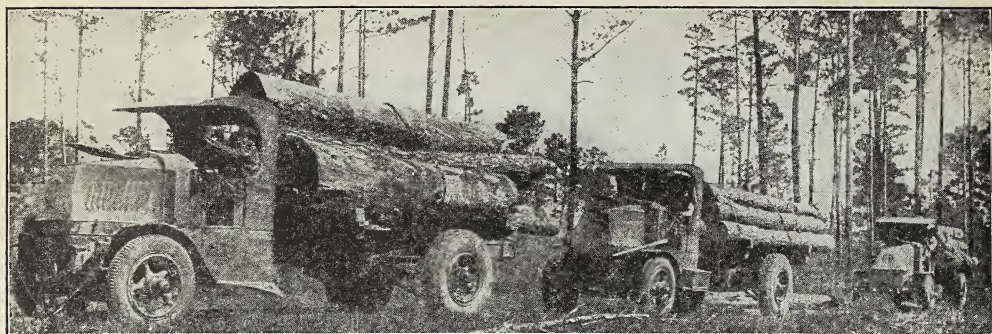
"medium," "short," and "sea-island" in their proper places on your map.

2. Make a drawing of a big wagon with high sides. On the wagon write "1500 lb. cotton." After the wagon put an "equals" sign, followed by a bale, two box-like bins, and a barrel. On the bale write "500 lb. lint"; on one bin, "500 lb. hulls"; on the other bin, "350 lb. meal"; and on the tank, "150 lb. oil." Be ready to explain your picture.

3. Write a little story of all that you have learned about cotton; how it grows, how and where it is made into cloth, the machines that have helped us to make it usable, and other things. You can use the index in the back of the book to find the places where your book tells about cotton.

4. Today there is being made from cotton a kind of cloth that is much like silk. See if you can find what this cloth is called and how it is made.

Books to read: Allen, *Geographical and Industrial Studies—United States*, pp. 60-74; Brooks, *The Story of Cotton*, entire; Carpenter, *The Clothes We Wear*, pp. 9-19; *New Geographical Reader—North America*, pp. 139-146; Curtis, *The Story of Cotton*, entire; Lefferts, *Our Own United States*, pp. 97-102; Pitkin and Hughes, *Seeing America—Farm and Field*, pp. 127-135.



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Fig. 386. Hauling out Southern yellow-pine logs. How else did we learn that logging can be done?

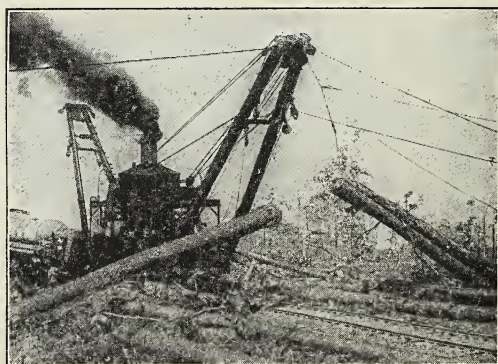
LUMBERING AND FARMING

Southern yellow pine. When De Soto wandered through the Cotton Belt, it was one vast forest. The Indians had cleared tiny patches here and there for raising their corn, potatoes, and tobacco; but for the most part there were trees, trees, and more trees, everywhere. Most of them were tall, straight, yellow pines (Fig. 386), which the Southern planter had to cut and clear away before he could raise his cotton or build his home. He used the very best of the timber for lumber for his buildings, and the rest he burned. Millions of feet of good lumber were wasted in this way, but there is still enough timber left in the Cotton Belt so that it is a Lumber Belt, also.

In the South, where there are no heavy snows, we can readily see that the work of logging is a little different from what it is in Minnesota and Michigan. Instead of being hauled to the river over the snow and ice and floated downstream to the mill in the spring, the logs are carried directly to the mill by means of railroads or trucks.

A railroad is built from the sawmill into the center of a section of the forest. The trees are felled quite a distance back from the railroad, the limbs cut off, and the trees cut into logs. A machine called a skidder is placed beside the track. In the picture notice several wire ropes, or cables, stretched from

the top of the skidder. These cables are very long, so that they can reach out far from the skidder. The ends are fastened to the logs, the engine winds up the cables and pulls the attached logs close to the track where they can be loaded. The skidder can pull in all the logs that can be cut from a twenty-five-to thirty-acre tract in this way before it need be moved. Sometimes mules or oxen are used instead of an engine to pull the cables of the skidder. At the railroad the logs are loaded on flat cars and hauled to the sawmill. When all the logs have been cleared from one place, the skidder is moved, and another thirty-acre patch is cleared of its trees. In some places motor trucks or high-wheeled carts and wagons are used to haul the logs to the railroad or to the mill.



By Ewing Galloway, N. Y.

Fig. 387. A skidder at work in a Southern forest



By Ewing Galloway, N. Y.

Fig. 388. Logging in the Southern swamps. These workmen are making a raft of logs to be floated out of the swamp to the river and down to the sawmill. At the right side of the picture is the boat.

Cypress trees. The pine is not the only good timber found in the forests of the Southern states; the cypress is another valuable wood. The home of the cypress is in the swamps along the coast and in the swampy places along the slow-moving southern rivers and bayous. The trunk of the cypress tree is usually very broad near the ground. Curious growths, called cypress knees, spring up from the roots all around the tree and stick up out of the water. In the swamps the skidders for moving the cypress logs are built on boats. Sometimes the trees are cut, trimmed, sawed into logs, and left lying in the swamps until heavy rains or floods make the water deep enough to float the logs. Then they are hauled out of the water by the skidder, or made into rafts and floated to the mill (Fig. 388). Cypress wood is tough, and it does not rot easily. It is used for inside and outside trim for houses, and for shingles. Builders like to use cypress shingles, for they last a long time.

Other woods. Gum, sycamore, cottonwood, and oak trees grow in the rich soil

along the rivers, but not in the swamps. Gumwood takes a beautiful finish, and is used for furniture and for inside work in houses and public buildings. Sycamore and cottonwood are used for boxes, crates, and such things. Oak is used for furniture and other articles needing a hard lumber. Louisiana and Mississippi are the leading lumber states of the South. There are fine forests of hardwoods—oak, hickory, ash, and maple—in the Appalachian Mountains of the Carolinas, Georgia, Alabama, and in the Ozark Plateau in Arkansas. Arkansas produces much timber for staves used in making casks and barrels.

Saving our forests. All over our country the forests have been cut away faster than they can grow. The United States Government saw that unless something were done to save our trees, they would all be gone in a few years. So the government is now buying forests and allowing only the trees that are large enough for lumber to be cut. Part of this land is leased to lumber companies. Some of our lumber companies cut only the large trees



Courtesy Stuttgart, Ark., Chamber of Commerce

Fig. 389. A rice field about ready for the harvest. You can see what a thick, heavy grass it is.

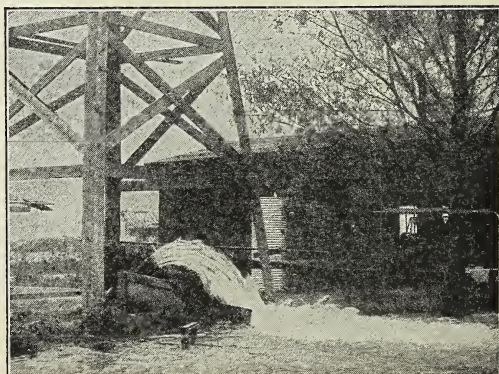
and plant young trees in the place of those cut. These companies, as well as the government forest service, also have men who keep on the watch for fires. In this way we may save our forests.

Rice-growing. We learned that the first rice grown in this country was brought to South Carolina from Madagascar by a sea captain in the early days of the colony. This rice was planted by hand, about as it is in China today, in the swamps along the coast. Rice is a plant that needs plenty of water. Today most of the rice raised in the United States is grown on the level lands of Louisiana, Arkansas, Texas, and the Sacramento Valley, California. In these sections the rice land lies where plenty of water for irrigation may be had, either from streams or from wells. If no river is near, a deep well is driven on the highest point on the rice farm. A powerful pump sends a thousand or more gallons of water a minute out over the fields. Dikes, or ridges, are thrown up across the fields. These dikes keep the water from running off too soon, which would injure the young rice. Then a shallow ditch is cut from the pump-house across the dikes to carry the water to all parts of the field.

Rice may be planted with a drill in the same way as wheat. When the plants are a few inches high, the water is turned in and the fields are flooded. Water to a depth of two to eight inches is kept on the rice until the grain is nearly ripe. Then the water is drained off, and when the ground is dry, the rice is harvested like wheat. The stalks are cut and stacked in shocks so that the grain may dry and harden. After the rice is threshed, it is taken to the mill where the golden yellow hull is removed. It is then run through a machine which polishes the kernels bright and shiny. New Orleans is the principal rice market.

Rice is a good, cheap food, but the people of this country do not use much of it. Most of our rice is shipped to the countries in Asia. However, more and more rice is being grown in our country. In the Southern states there are many thousands of acres of land that are better suited to the growing of rice than anything else.

Sugar cane. You will notice from the map (page 238) that the southern part of Louisiana extends out into the Gulf of Mexico. This low, flat land is called the Delta of the Mississippi, and the soil is rich and excel-



Courtesy Stuttgart, Ark., Chamber of Commerce

Fig. 390. Pumping water over a rice field



Visual Education Service

Fig. 391. In a Louisiana cane field. One of the men is holding a knife with which the cane is cut.

lent for raising crops. The rich soil and the hot summer weather, with plenty of rainfall, make conditions just right for the growing of sugar cane in the Mississippi Delta. In fact, so much sugar cane is grown in the parishes or counties just west of New Orleans that this section has been called the Sugar Bowl of Louisiana. Some of the plantations are very large, containing 10,000 acres or more.

Growing the sugar cane. The sugar plant grows in the form of a tall stalk. We call the stalks "cane" because they look like bamboo cane. The sugar plant is not grown from seed, as are rice, corn, and wheat. Instead, the stalk is planted. The planter plows the ground deep and lays off furrows about six feet apart. Pieces of cane are laid in each furrow and covered with about six inches of soil. The young cane grows from buds at the joints in the stalks and is cultivated like cotton or corn. The work on the sugar plantations is done mostly by Negroes. On the large plantations one white overseer usually looks after the work of fifty to seventy-five Negro workers. Such a plantation may have miles of small railroad or use trucks for hauling the sugar cane to the mills.

Harvesting the cane. Late in the fall the cane is from eight to twelve feet high. The leaves are stripped, tops cut off, and then the cane is cut. An acre will produce from twenty to forty tons of cane, and each ton of cane will make about 160 pounds of sugar. You can see, then, that an acre produces about a ton and a half of sugar. The people of the United States have such a "sweet tooth" that each person eats about 100 pounds of sugar in a year.

Making the sugar. After the cane is loaded on the cars, it is hauled to the mill, where it is run between great rollers that squeeze out the juice. The juice is then boiled until it forms a syrup. After the syrup has cooled, brown



Courtesy International Harvester Co.

Fig. 392. Boiling down the juice from the cane



U. S. Department of Agriculture

Fig. 393. A fine grove of pecan trees in the South

sugar crystals separate from it. The thick, dark juice that is separated from this sugar is the molasses your mother gets to make cookies. When the sugar is dry, it is sent to a refinery where it is refined into the pure white sugar we buy at the grocery. After the juice is squeezed out, there is still a use for the cane. A kind of wall board used for finishing houses on the inside is made from the pressed cane pulp.

The thing that troubles the sugar-growers of Louisiana is the fact that occasionally, from November to March, cold winds from the north blow down the Mississippi Valley bringing with them enough frost to damage the cane. In Louisiana the cane is planted in October and November, with some summer planting in August. One planting usually lasts three years. In Cuba, where frost never comes, a planting lasts longer than this. Labor is cheap, and so sugar can be raised more cheaply than in Louisiana.

Fruits and vegetables. Fruit and garden truck are being raised more and more in the Southern states. The Gulf Coastal Plain, like the Atlantic Coastal Plain, has a rich soil and a long, warm summer season when plants can grow. Many large orchards of grapefruit and some orange and lemon groves may be seen along the Rio Grande River in southern Texas. The same section produces great quantities of garden truck for the early Northern market. In southern Alabama and Mis-

issippi, Satsuma oranges and tangerines are grown, and the whole Gulf region is well suited to the growing of delicious figs. Arkansas, Louisiana, and Mississippi produce large quantities of fruit, but more should be grown in this region. These states, together with Missouri, produce millions of quarts of strawberries for our shortcakes. In our study of the South Atlantic

states, we learned that Georgia is the home of the early peaches for the Northern market. But thousands of bushels of this fine fruit are grown every year in the other parts of the South Central region.

Pecans. When the first white men came to the South, they found wild pecan, walnut, and hickory trees. The hogs that the Spaniards brought with them were soon living on nuts, persimmons, and locust beans. Acorns and other nuts are known as "mast," when we speak of them as food for hogs. While hogs in many sections of the Southern states still feed on mast, they do not get so many walnut, hickory, and pecan nuts. The wild nuts have been improved until they are now an important food product for people. They have become too valuable to be used as feed for hogs.

A few pecan trees were found whose nuts were large. The shells were thin and easily cracked. These nuts came to be called paper-shell pecans. The nut meats were very large and of fine flavor. Special care was taken of these trees, and more like them were planted. As time went on, people all over the United States learned of these fine nuts, and now pecan-growing has become a business in itself. Some of these trees grow to be 100 feet high and will produce as many as 150 to 500 pounds of fine nuts, which sell for a good price. You can see that such a tree is valuable to a farmer.

Cattle. If you study the cattle map (page 211), you will see that, except for Texas, the Southern states do not produce many cattle. Perhaps this is partly because the Texas fever tick used to cause cattle-growers in these states so much trouble. This tick is a little insect that looks something like a small brown spider. It bores into the cow's hide and sucks the blood. If the cow has Texas fever, the tick will carry the fever to the next animal it bites. The farmers get rid of the ticks by making their cattle swim through a narrow tank filled with a liquid that kills the pests (Fig. 394).

Cattle can be raised very cheaply in the South. They can graze in the fields almost all year, but in winter they are given additional feed such as oats, corn, and cottonseed meal. Barns for the cattle are not so necessary as in the North where the winters are severe. Then, too, there is plenty of land in the Southern states on which to raise corn to fatten the cattle for market. Texas is at present the great cattle-raising state of the country. On the great plains of western



By Ewing Galloway, N. Y.

Fig. 394. "Dipping" sheep to free them from harmful insects. Cattle are dipped in much the same way.

Texas there is plenty of room for the herds.

Corn grows well in the South and is used to fatten the hogs that have grown to a good size. Clover, sweet potatoes, and peanuts are some of the other crops used to feed the hogs. Texas produces more turkeys than any other state.

The fruit of the Ozark Plateau region. The Ozark Plateau lies in the central part of the Mississippi Valley and is like parts of the Appalachian Highland in North Carolina and Tennessee. The Ozark soil is not rich, and farming is harder than in the surrounding country. Fruit-growing is the

chief industry, and one finds many orchards of a hundred acres or more. Apples, peaches, and grapes of the finest quality grow on the hills of the Ozarks of Arkansas, Missouri, and Oklahoma. Arkansas even ships apples to England. Thousands of tons of grapes grown on these hills are made into grape juice, and other thousands of tons are shipped fresh to Northern markets. The grapes in this region ripen earlier than those in the

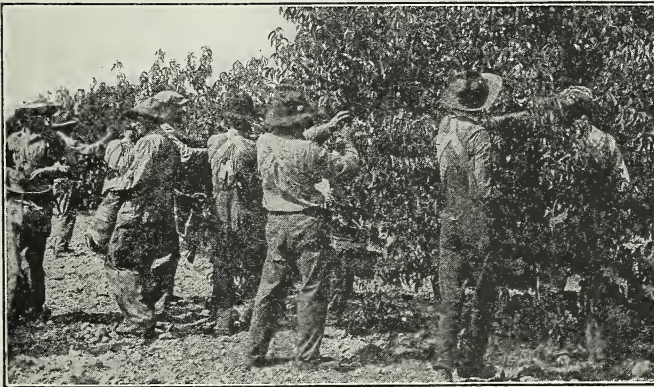
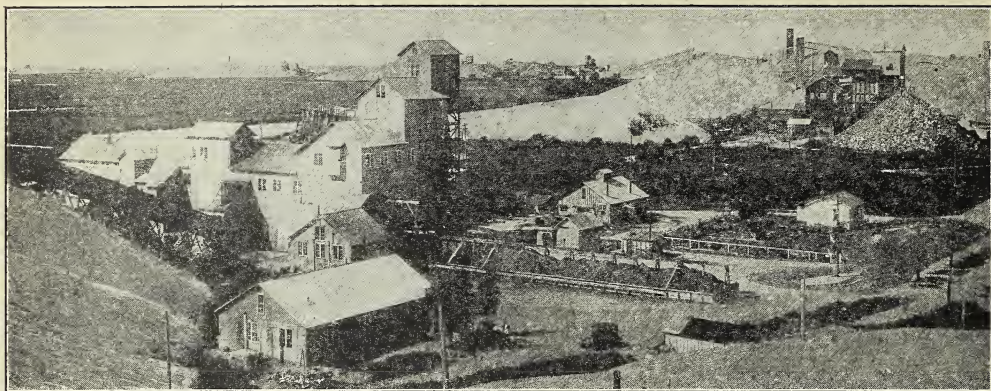


Fig. 395. Picking peaches in Arkansas. The orchards in just one small region of southwestern Arkansas have over two million trees. From this region are shipped each year thousands of carloads of peaches.



Courtesy Joplin Chamber of Commerce

Fig. 396. Lead and zinc mines near Joplin, Missouri. Lead and zinc are usually found together.

North and in California. A large part of the strawberries of the United States are produced in the Ozark region, and they are fine in quality. The Southern states grow about half of the strawberries in the country.

QUESTIONS TO ANSWER

1. How does logging in Southern forests differ from that in Minnesota? Tell how the skidder works. 2. What kinds of trees are found in the Southern forests? Which kind is found in the swamps? 3. For what are some of the kinds of lumber used? 4. What kinds of trees grow where you live? Are there trees around your school building or home? What kind are they?

5. Give a reason why rice is not grown in the highlands. 6. Tell the story of rice-growing. Where besides in the Southern states is it grown in this country? 7. If there should be a poor rice crop in China this year, would the rice-grower of our country receive a higher or a lower price for his rice? Why?

8. Where is the Sugar Bowl in our country? 9. How is sugar-cane planted and grown? 10. How is sugar made? 11. Why is part of the plantation planted every spring? 12. Do you know other plants from which sugar is made? You will learn of another plant later. 13. What island near the United States grows cane? Why is that a good place for sugar-cane?

14. Why can the Southern states grow so many different kinds of fruit—everything from apples to oranges? Name some of the fruits that are grown

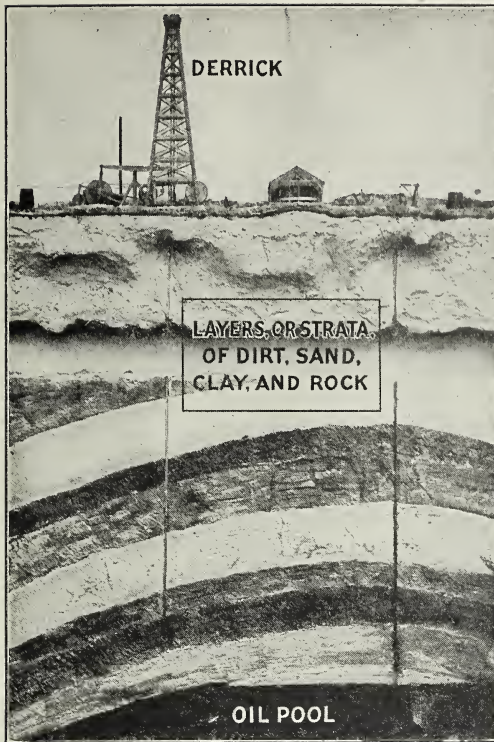
there. 15. For what is the Ozark Plateau region famous? 16. In what two ways can the Southern farmer make good use of nuts? 17. Why is the South a good region for cattle-raising?

THINGS TO DO

1. On your outline map of the Southern states, add fruit, lumber, rice, and sugar in their correct places. 2. Find the names of the different kinds of wood in the furniture and building of your home. List them, and tell what each kind is used for. Make also a list of the kinds of trees in your neighborhood. If some of the kinds of wood you find at home are not mentioned in this book, try to find where they come from. 3. Look through magazines for advertisements of different kinds of wood. What do the people who sell them say about them?

MINERALS AND MANUFACTURING

Coal, iron, lead, zinc, and stone. The coal map (page 99) shows that there is a coal-field in the Ozarks in Arkansas and Oklahoma. You will find also that the great Appalachian coal-fields extend south into Alabama. Iron ore, as well as the limestone rock so necessary for smelting the ore, is found in Alabama, near Birmingham. You would expect, then, to find many blast furnaces and steel-mills near the city of Birmingham. In fact, this city is called the Pittsburgh of the South. Birmingham has one advantage over Pittsburgh: the necessary raw materials are



© Underwood and Underwood

Fig. 397. A model built to show an oil well being driven and one that has reached the oil pool.

close at hand. Pittsburgh has to get its iron ore from the Lake Superior region, but Birmingham has its iron mines near at hand. Birmingham can easily ship its finished iron and steel products to Central and South America by way of Mobile and New Orleans.

Zinc, which is used on the outside of iron pipes and other articles to keep them from rusting, is found in the Ozark region. Nearly one half the zinc of the United States is mined there. Lead is found in the same region, usually in the same mines with the zinc. About one third of the lead of the country is mined in the Ozarks. Water pipes, bullets, and many other articles are made from lead. Arkansas produces nearly all the bauxite in North America. Bauxite is a clay in which is found the aluminum for making

mother's kettles and pans. Aluminum is a very useful metal. It is not nearly so heavy as iron and steel, and it will not rust. It has many uses in making machines. This state also claims to have the only diamond mine in America, but the diamonds are not of very good quality.

Georgia, Alabama, Arkansas, and Oklahoma have great quantities of granite, marble, and limestone. On Stone Mountain, a mountain of solid granite near the city of Atlanta, are being carved figures of the Southern heroes of the Civil War (see Fig. 369, page 246). There is a mountain of granite near the city of Little Rock, the capital of Arkansas. The Ozark region is rich in many kinds of marble and granite, waiting for the time when the growing cities of the South will need the material for building purposes.

Petroleum and gas. Read again the story of how coal was made. Petroleum, or oil, as it is called, was made in much the same way. Sea plants and animals were buried in mud, sand, and water. As they decayed and were pressed down by the weight of the layers of mud and sand that were deposited above them, oil and gas were formed. Layers of sand and rock have held the oil and gas underground for many thousands of years, waiting for men to drill down into the earth for them.

Wherever oil men think petroleum is to be found, they bore or drill a hole into the ground to get it. A derrick like that in Figure 397 is first built. This derrick holds the big drill as it bores. As the hole goes deeper and deeper, a six-inch pipe or casing is let into it to keep the hole open. Oil is sometimes found only a few hundred feet below the surface. At times the well must be driven a half mile or even a mile into the ground. When the driller thinks he is nearly to the petroleum, he watches for signs of oil in the cuttings of limestone from the bottom of the hole. If he finds enough oil in the cuttings, he pulls out the drill, puts some



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Fig. 398. A gusher at Burkburnett, Texas. The well has been capped and piped. Now turn to page 354 and look at Fig. 524.

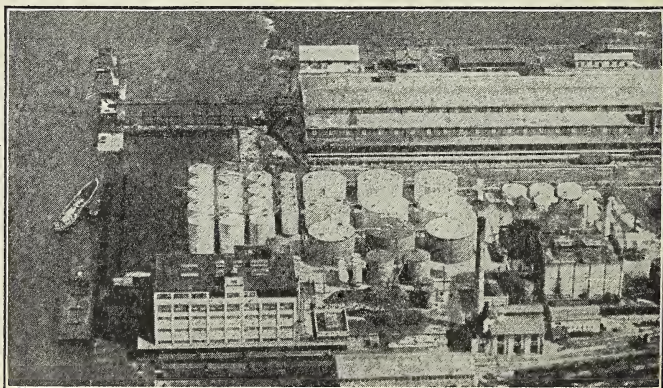
nitroglycerine down the hole, and explodes it with an electric spark. The explosion breaks the crust of earth over the pool of oil so that it can come up out of the pipe.

Sometimes a powerful stream of petroleum gushes out and shoots high into the air. Such wells are called gushers (Fig. 398). The driller has everything ready to put a cap on the top of the pipe to hold the petroleum until it can be carried away in pipes to the storage tanks (Fig. 399). Sometimes the petroleum shoots up so hard that the workmen lose control of it. One gusher in Texas shot a stream of oil one hundred sixty feet into the air. Seventy-five thousand barrels of oil a day came from that well. A well in Mexico blew out the pipe and shot oil hundreds of feet into the air. The oil caught fire and burned for a month before the oil men could put it out. Of course, when oil is found in such quantities, the owners make millions of dollars in a short time. But few wells are gushers; in most of them the oil flows out instead of gushing. In some wells it is necessary to pump the oil out from the beginning. A

well may last for years, or for only a few months.

The petroleum, or crude oil, as it is called, is pumped into tank-cars, such as you have often seen, and hauled away; or it may be sent to the refineries through pipe-lines that run for hundreds of miles under the ground (Fig. 400). Powerful pumps placed every fifteen or twenty miles along the pipe-line keep the oil flowing.

Refineries are built near wells or near the cities where the oil products will be used. At the refineries the petroleum is separated into gasoline, kerosene, motor oil, fuel oil, paraffin, asphalt, and other products; none of it is wasted. Railroad tank-cars carry the gasoline, kerosene, and oil from the refineries to markets all over the country. Some of the pipe-lines lead to the seacoast, where the petroleum, or crude oil, is pumped into tank ships and sent across the sea. Port Arthur, Texas, is the great oil-shipping port. More petroleum is produced in the United States than in all the rest of the world, and the South produces over half of our supply.



© Keystone View Co.

Fig. 399. In tanks like these the oil is stored.

Natural gas. Natural gas is usually found in the same regions as petroleum. It is piped to the near-by cities and used as fuel to run the factories and to heat and light the homes. The boys who live near the gas-fields do not have to carry in wood, coal, and kindling for the morning fires; gas is cheaper and makes less work. There are many gas wells near Fort Smith, Arkansas, east of the oil-fields of Oklahoma. Glass factories in Fort Smith depend upon the gas wells in this section for fuel. Zinc and lead from the Ozarks are shipped to this city and smelted in gas furnaces.

Sulphur. In the lowland region of Texas and Louisiana, along the Gulf, there are sulphur mines that furnish most of the sulphur used in the United States. Sulphur is not mined as you might think. It is not dug out of the ground. Holes or wells are drilled into the sulphur bed far underground, and hot steam is forced down. This melts the sulphur, which flows out of the well. In the air the moisture quickly dries out, leaving hard blocks of yellow sulphur. Do you know any uses of sulphur? Try to find some.

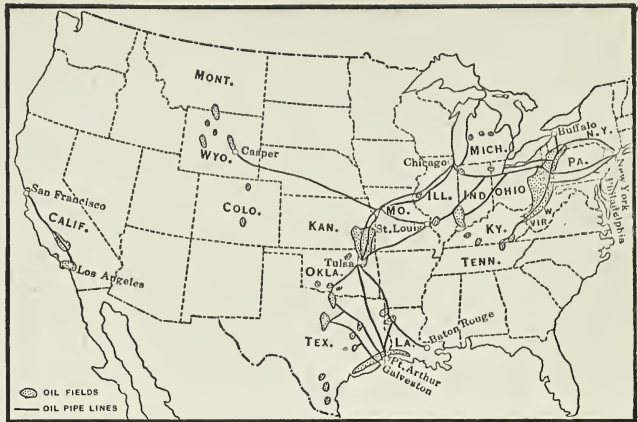


Fig. 400. It is cheaper to lay these pipe-lines and pump oil through them than to haul the oil by railroad.

Manufacturing. You remember that the old South did not have many factories, and that this was one reason why the South could not win the War Between the States. After the war the people had hard work to make a living. They had neither time nor money to build factories. But the new South during the last twenty-five years has built many factories. In your study of the South Atlantic states you learned that the cotton-mills on the Fall Line and in the Piedmont have more cotton spindles than the New England states. Do you remember why it was that the mills were built in that section?

Notice how the Tennessee River flows southwest into Alabama and then northwest across western Tennessee and Kentucky. The government has been trying to use the river in the same way the people of New England have for many years used their swift streams. During the World War the United States Government built the Wilson Dam across the Tennessee River at Muscle Shoals, Alabama. Now the Government, under the Tennes-

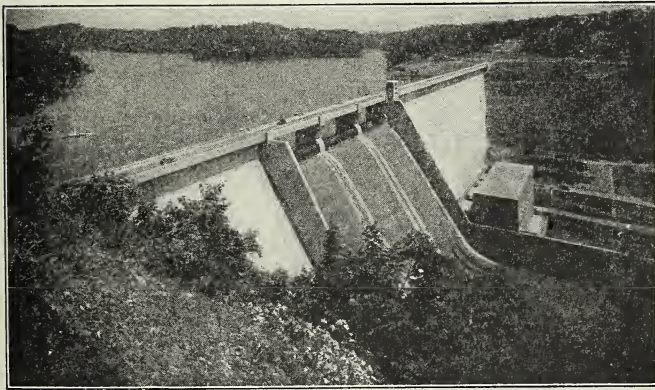
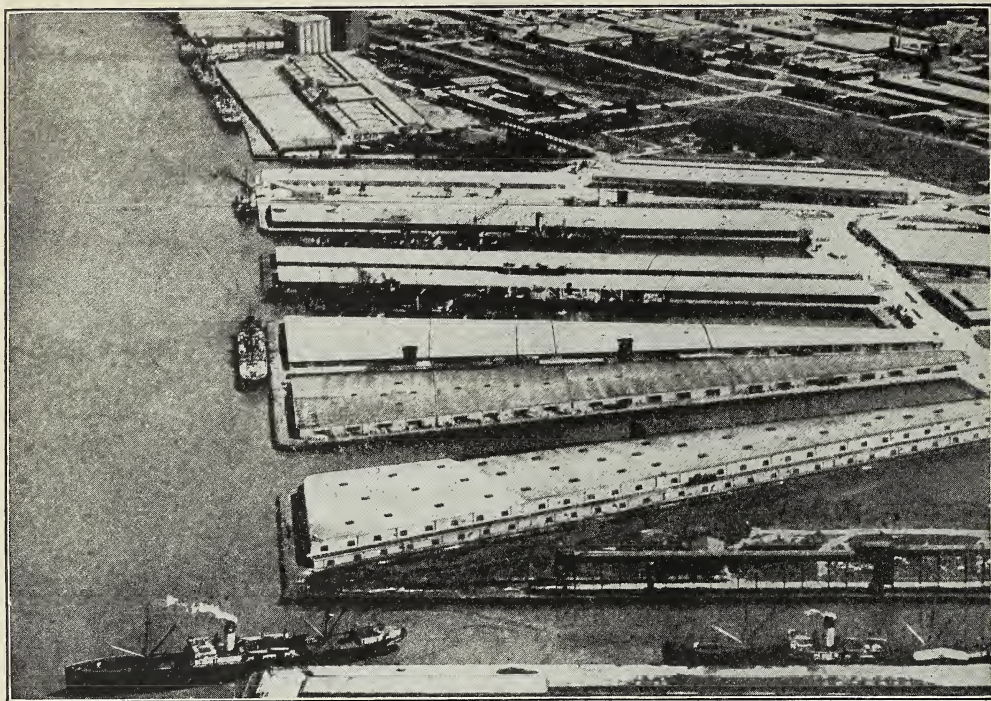


Fig. 401. Norris Dam, one of the big dams of the TVA. Notice its height and length and the large amount of water available.

Tennessee Valley Authority



© Keystone View Co.

Fig. 402. Part of the harbor at Galveston, Texas, the greatest cotton-shipping port in the world. In one year more than three million bales of cotton went out from this port.

see Valley Authority, is building a number of dams on the Tennessee itself to help in navigation and flood control, and to produce electric power. Seven large dams have been built since 1933, and several others are under construction or are being planned.

Lumber, turpentine, pitch, and tar come from the pine trees of the South. Even the pine needles are useful. The needles, and the limbs cut from the trees in trimming them for lumber, are made into paper. The Spanish moss which hangs from the trees along the rivers and roads, making them look so strange and beautiful, is gathered and sent to moss gins to be ginned and baled, and then sent to factories where it is made into mattresses and cushions. With water in the mountains for power and with oil and gas in the lowlands for use as fuel, the South will manufacture more and more in future years.

New Orleans. New Orleans, the Crescent City, is the largest city in the South and a very busy one. Learn what railroads run into New Orleans. Corn, hogs, wheat, cattle, lumber, cotton, machinery, automobiles, petroleum, sulphur, and other products from the Mississippi Valley are shipped from New Orleans to other countries. You remember that even in the early days the American settlers along the Ohio and the Mississippi used New Orleans as their seaport. It is a great ocean gateway to our country.

The ocean steamers that come to New Orleans bring bananas and other fruits from Central America and the West Indies. Coffee, sugar, rubber, many other articles from South America, and countless articles from Europe, which we do not make or raise in this country, come in at this seaport. Docks and warehouses line the bank for about eight miles up



© Airview Corporation of America, Courtesy New Orleans Chamber of Commerce

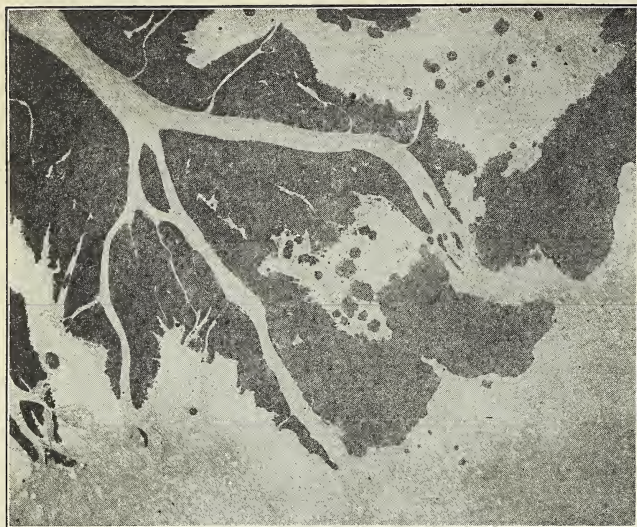
Fig. 403. New Orleans and the Mississippi from the air. If the picture were big enough, Lake Pontchartrain would show in the upper left-hand corner. The canal connecting the river with the lake is at the top of the picture. It joins the river just above the sharp bend.

and down the river, and ocean steamers from nearly every country on the globe may be seen at these docks (Fig. 358).

As we might expect, there are many factories in New Orleans. We find sugar refineries, rice-cleaning plants, ship-building yards, flour mills, an immense oil refinery, and machine shops. New Orleans spent about \$20,000,000 building a canal from the river to Lake Pontchartrain on the other side of the city. About midway in this canal a basin a thousand feet square has been dug where ocean steamers may be turned around. Docks, warehouses, and factories have been built along the shores of the canal and the basin. In early days vessels from the Gulf of Mexico also came to New Orleans through Lake Pontchartrain. Study the map on page 238 and see just where New Orleans and Lake

Pontchartrain are located. Ever since the days of the French, New Orleans has been an important port. Quantities of goods are shipped from here to foreign countries.

You remember that New Orleans was for years a French city. Some day you will want to see the old French quarter of the city. In it are narrow streets, fine old buildings with iron balconies, the old cathedral, and interesting houses in which are inner courtyards with lovely gardens. In the center of this part of the city is a park, in which is a statue of Andrew Jackson. You remember he won the Battle of New Orleans in the War of 1812. In New Orleans many of the customs of old France are still kept. If you visit one of the French homes in the old part of New Orleans, you will find it like a visit to old France. When you awaken in the morning, a servant



U. S. Coast and Geodetic Survey

Fig. 404. An airplane view of part of the Mississippi delta

brings you a cup of steaming hot coffee, which you are supposed to drink while still in bed. For the Louisiana Frenchman no day is started right without the early morning sip of coffee. The French are very hospitable people and entertain their guests royally. You would be taken for a drive over beautiful boulevards lined with mammoth oak trees covered with Spanish moss. Palms, poinsettias, honeysuckle, jasmine, and roses—flowers are everywhere both summer and winter. Guests are often taken to the Gulf for a few days' fishing and bathing, and a sportsman would visit the marshes along the seashore to hunt wild ducks.

The Mississippi delta. Many, many thousands of years ago the Gulf of Mexico was very much larger than it is today. All of what is now the state of Louisiana, a little more than half of Arkansas, all of Mississippi, and small parts of Tennessee, Kentucky, Missouri, and even the tip of Illinois, were once a part of the Gulf. In those far-off days the Mississippi flowed into the Gulf just above Cairo, and the Ohio flowed into the Gulf at Cairo. Since that time the rivers have

brought dirt and mud down from the mountains and hills and filled in all that space. The Gulf of Mexico will be more and more filled in as time passes.

Notice how the land at the mouth of the Mississippi stretches out into the Gulf. All that land—the delta of the Mississippi—is made from dirt the river has carried down and left there. By tracing the Mississippi River and its branches to their sources you can see that the dirt for making the delta came from the states farther north. Year after year when the snows along the Missouri and Ohio rivers began to melt and the heavy spring rains began to fall, the loose dirt

was washed down the hills and fields into the rivers. The rivers poured their muddy water into the Mississippi, and the Mississippi rose higher and higher and often overflowed. As the water spread out over the land, it flowed slower and slower, and the dirt settled to the bottom. Then when the water flowed off or dried up, there was left a thin layer of new soil. Thus the Mississippi "built" land.

Floods and levees. In years when there is unusually heavy rain and snow in the Mississippi Valley, the Mississippi overflows its banks and spreads out over thousands of acres of level land. For years the people living along the river have been building banks or levees to keep the water from overflowing. The states along the river, and the United States government, have helped in this work, until now there are levees all along the river from Cairo, Illinois, to New Orleans. These levees are big banks of dirt, sometimes thirty feet high (Fig. 405). In some places the levee is several miles from the river itself. If it were built too close, the flood waters would tear it to pieces. They have to be allowed to spread out before they can be stopped.



By Ewing Galloway, N. Y.

Fig. 405. Levees along the Mississippi. You can see that the river is higher than the land along it.

Sometimes the river rises five, ten, twenty, or even fifty feet. The water may run over the top of the levee or break through. A muskrat may dig a hole in it and thus let the water run through in a tiny stream. If the hole is not found and stopped in time, the water will tear a larger hole, called a crevasse. Then the river rushes through the break, destroying farms, houses, cattle, and anything else that may lie in its path. People who can not get out of the way of the rushing waters are drowned. In 1927 the Mississippi River levees broke in many places. Many people lost their lives, and more were made homeless. Since then millions of dollars have been spent for levees high enough and strong enough to keep the river in control. These levees have been so successful that even during the high waters of 1929 and 1937 there were no breaks in them, and only the unprotected lands along the river were flooded.

QUESTIONS TO ANSWER

1. What city is called the "Pittsburgh of the South"? Why? 2. From what port would you expect her iron and steel products to be shipped? 3. Locate the petroleum and natural-gas region of the Southern states and name the four states in this region. 4. How are oil and gas taken from the ground? 5. How is most of the oil and all the gas taken to market and to the ports? What things are made from petroleum?

6. What articles are manufactured in the South that are not made in the North? 7. Give two reasons why New Orleans is located just where it is. 8. What may we expect to find on her docks? What has she done to take care of the ships? 9. In what ways is New Orleans different from other large cities? 10. Explain how the Mississippi River troubles the people of the cities and farms along its banks. Show by using the relief map, facing page 1, why the river causes this trouble. 11. What is being done to prevent this trouble?

THINGS TO DO

1. On your outline map of the Southern states, locate petroleum, natural gas, coal, and iron. 2. From what you have learned of the products of these Southern states along the Gulf, make a list of articles you would expect to find on the docks of such Gulf ports as New Orleans, Mobile, and Galveston. 3. Put the Gulf ports on your map, and show the railroads that run to them. 4. Look for advertisements of these Gulf cities in newspapers and magazines. Be ready to make a report on what these advertisements say.

Books to read. Allen, *United States*, pp. 75-110, 158-163; Carpenter, *New Geographical Reader—North America*, pp. 171-210; *The Foods We Eat*, pp. 19-26, 139-144; Fairbanks, *North America*, pp. 95-108; Hubbard, *Citizenship Plays*, pp. 295-303; Jordan and Cather, *Highlights of Geography*, pp. 102, 142-152; Lefferts, *Our Own United States*, pp. 117-145; Pitkin and Hughes, *Farm and Field*, pp. 169-212; *Mill and Factory*, pp. 42-65; Southworth and Kramer, *Great Cities of the United States*, pp. 245-263.



Fig. 406. How the American people spread westward from the Mississippi to the Pacific. Led by such brave explorers and pathfinders as Lewis and Clark, Fremont, and Pike, the Americans crossed the plains and the moun-

tains to dig for gold in California and Colorado, to trade with the Spanish peoples of the Southwest, and to farm the rich valleys of the Pacific Northwest. Study these trails to the West, for you will soon read about them.

FROM THE MISSISSIPPI VALLEY TO THE NORTHWEST

LEWIS AND CLARK EXPLORE THE LOUISIANA TERRITORY

THE START FROM ST. LOUIS

Getting ready to explore the new country. At the time Thomas Jefferson bought the Louisiana Territory from France, there were few white people in all that region. At St. Louis there was a small village made up mostly of Frenchmen. Fur traders and trappers from up the Mississippi and the Missouri came to the village to trade. There were several other tiny settlements along the Missouri River, where a few of the more daring people had come from Kentucky. You remember that Daniel Boone had come to Missouri when Kentucky became too crowded for him. He had built his home about fifty miles up the river from St. Louis.

For a long time President Jefferson had wanted to know what the country west of the Mississippi River was like. After the Louisiana Purchase was made, he asked Congress for money to send a party to explore the country. Congress voted the money needed for the journey, and President Jefferson chose his secretary, Captain Meriwether Lewis, as leader of the exploring party. "Lewis is just the one to send," Jefferson said. "He is a brave man, and he knows the Indian customs. He is educated and can tell when he has found anything new and worth while to report." Lewis asked Captain William Clark, a brother of George Rogers Clark, to go with him. Clark had

been in many Indian fights with his brother. He was a fine soldier and used to the hardships of pioneer life.

Lewis now went to Philadelphia and Pittsburgh to buy the things needed for their trip. Three boats were needed to carry the men, their food, clothing, guns, ammunition, tools, and the presents they took along for the Indians. There were bundles and bales of

presents: bright-colored coats, blankets, medals, flags, knives and tomahawks, and trinkets such as beads, mirrors, and paints. Lewis had taken great pains in buying these presents. With these he hoped to make friends with the Indians and get the food and other supplies the party would need on the way. President Jefferson had warned Lewis and Clark to "keep in peace and good will with the Indians."

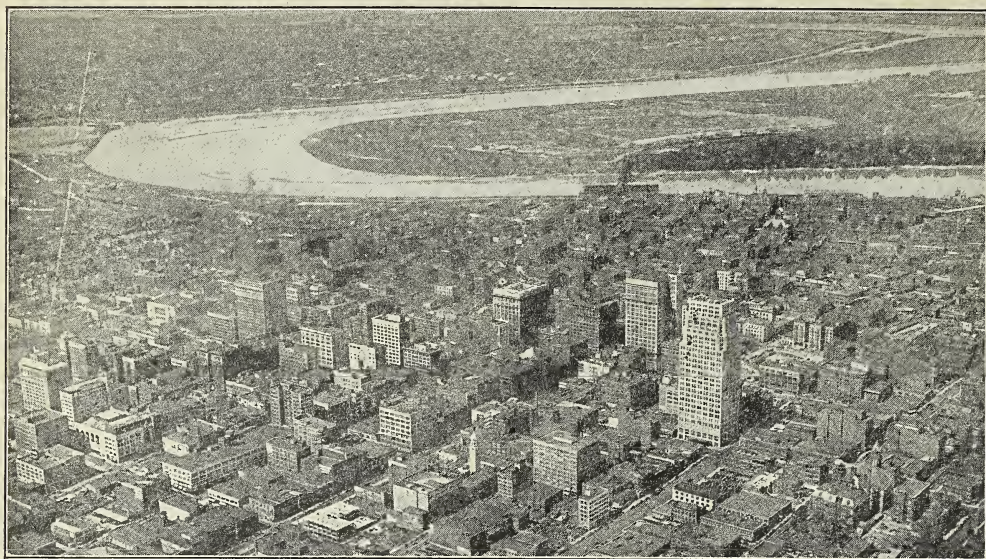
The winter at St. Louis. When his purchases were made, Lewis floated down the Ohio and met Clark at Louisville. Here they

picked a company of brave young men, mostly from Kentucky, to go with them. These men were enlisted in the United States army and were under army rules. The party went down the Ohio and up the Mississippi to St. Louis. It was now late in the fall; so it was decided to camp near there for the winter. Study the map on page 274. Find the line that shows the journey of Lewis and Clark from St. Louis to the Pacific.



Painting by Paxson in the Montana state capitol, Helena

Fig. 407. Captain Lewis (standing) and one of his men, Charboneau, a French trapper



© Creswell

Fig. 408. Perhaps, at the mouth of the Kansas River, Lewis and Clark camped on ground that in the years to come was to be part of the great city of Kansas City, Missouri. When they reached this place, they were leaving the forest lands and coming to the great, grass-covered prairies and plains.

The start up the Missouri. The little party broke camp in May, 1804, and started on their long journey up the Missouri River. During the first days of the trip they passed a few tiny settlements, and now and then they met French trappers coming down the river in canoes loaded with furs they had gathered during the winter. These trappers were on their way to St. Louis. They told Lewis that he would find many different tribes of Indians in the country through which he was going, and that great herds of buffalo roamed the wide, grass-covered plains. They warned Lewis to keep special watch for the savage Sioux Indians. Ten days from the time the explorers left St. Louis they had passed all signs of white men, and in six weeks they reached the place where the Kansas River flows into the Missouri (Fig. 408). What two cities are now located at this place?

This was not an easy trip. The men had to row the boats against a strong current. At times they even had to push them along with poles. They were able to go only ten

to twenty miles a day. Logs and branches that came floating down the river threatened to smash or upset the boats, and there was always danger of getting stuck on a sandbar. One day some loose earth on the bank caved into the river and nearly upset the boats. At night the men tied their boats to trees along the river bank and camped on the shore. The boats carried heavy loads, for the men had to take many supplies. In addition to clothes and food, they took beads, clothes, medals, knives, and other presents for the Indians. They used some of these articles to trade to the Indians for more food. They took no fresh meat with them, but there were deer, bear, buffalo, turkey, and fish along the way. The men needed plenty of food, for they were working hard in the open air. Besides the boats, the men had two pack horses which traveled along the shore as the boats went up the river, carrying extra ammunition and the game that was shot along the way.

A council with the Indians. Of course the men had seen Indians all along the way.

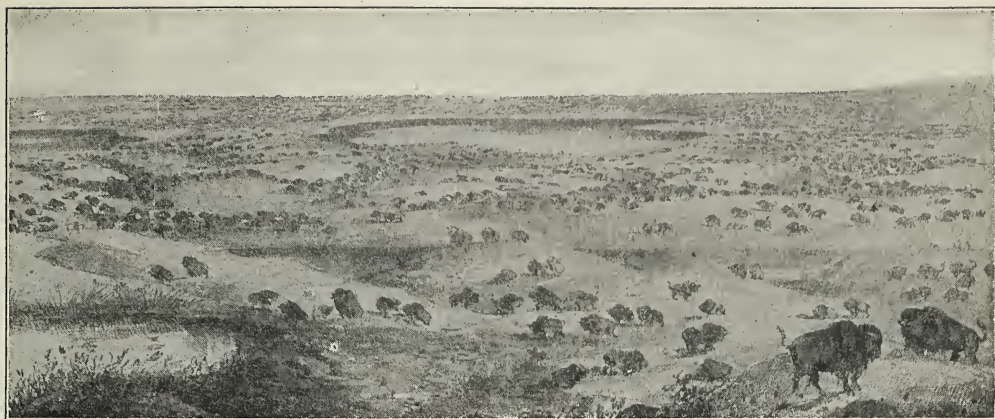


Fig. 409. When millions of buffalo roamed the Great Plains from Texas to Canada. The Indians thought that the buffalo came up out of great caves in Texas, and their name for Texas was "The land where the buffalo come up out of the ground."

Courtesy McKinley Pub. Co.

Whenever they came to a new tribe, Lewis invited them to a council meeting or powwow. Early in August the party reached the mouth of the Platte River. Here the men stopped for a big powwow with the tribes in that section. They had sent one of the Frenchmen of the party with a friendly Indian to invite the tribes to come. The council was held on the high bank or bluff of the Missouri across from the mouth of the Platte River. Today the city of Council Bluffs stands near the spot. It takes its name from that council with the Indians.

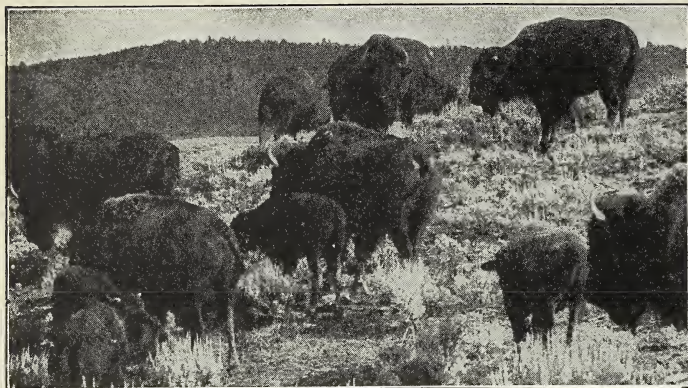
This important meeting was opened by smoking the peace pipe. Lewis told the Indians that the hunting grounds did not belong to either Spain or France any longer; that they, the Indians, were now children of the Great Father at Washington. The Indian chiefs made speeches then, saying they were glad of the change in government and asking for help against an enemy tribe. Lewis gave presents to the Indians. He gave medals to the chiefs, and to the rest he gave paint, some gunpowder, beads, and other articles. These presents pleased the Indians very much. In return they gave Lewis buffalo robes and tents made of painted buffalo hides.

THROUGH THE GREAT PLAINS COUNTRY

The great herds of buffalo. There were very few trees in most of the country through which our men had been traveling. To the west lay the Great Plains, covered with a short, wiry grass. Here and there deep paths ran in different directions. The Indians said that these were buffalo paths. A Spanish explorer wrote this about the buffalo:

The plains are as full of crooked-backed cattle as the Spanish mountains are full of sheep. There are no people to keep these cattle. They have more hair on their fore parts than on their hind parts, and it is more like wool. They have a horse mane on the backbone, and beards on their throats and chins. The males have very long tails with a bunch at the end. They are somewhat like a lion and somewhat like a camel with humps.

In the early days there were buffalo in the eastern part of the United States as well as in the western. Daniel Boone followed a buffalo trail part of the way over the Wilderness Road into Kentucky. But it was on the plains of the West that the buffalo roamed by the millions. In the summer the buffalo moved north in great herds. When the snow came in the fall, they moved to the south again in search of the dry bunch grass of the plains. It is hard for us to imagine the great



By Ewing Galloway, N. Y.

Fig. 410. A herd of buffalo in Yellowstone National Park. A few scattered herds in private, state, and national parks are all that are left of the millions that once roamed the plains of the West.

numbers of these animals that roamed the plains. One hunter tells that he rode through a herd of buffalo for three days before he finally got out. There may have been tens of thousands of buffalo in a single herd. The first railroad trains that crossed the plains were sometimes stopped for hours waiting for a herd to cross the track.

These huge animals were wise in some ways. When the herd was grazing, five or six of the bulls kept watch on the outside. If they saw anything strange, they would sniff the air and look the thing over. If they decided it was dangerous, they gave the alarm by running to the center of the herd. Then all the bulls formed a circle around the calves and their mothers. Sometimes the whole herd would be frightened and run away in a mad gallop across the plains. This was called a stampede. A herd of buffalo on a stampede was as dangerous as a prairie fire. Sometimes a party of white men camped on the plains would find themselves in the path of a stampede. The only thing they could do was to jump on their horses and ride for their lives. When the herd had passed, the campers would find their wagons and tents in ruins.

One day the men in the Lewis and Clark expedition saw what looked to them like a rain cloud in the distance. They soon saw

that it was a cloud of dust. Then they heard a roaring noise like a terrible wind or distant thunder. Finally they saw that this cloud of dust and this strange noise were caused by a great herd of buffalo two miles across and so long they could not see the end of it. A deep gully lay in their path, but the buffalo kept falling into this gully until their bodies had filled it level full. The others ran right over them. All day and most of the

night the buffalo were rushing by.

Buffalo skins made good robes for sleighs in the winter, and the people of the East were so eager to buy them that thousands of hunters came to the plains to kill the buffalo for their skins. This was great sport for the hunters, and millions of buffalo were killed and their skins sent to the eastern markets. While the railroads were being built, hunters were hired to kill buffalo to furnish meat for the workmen. William F. Cody got his name of Buffalo Bill because he killed so many of the animals for one of the companies.

Sometimes hunters took only the tongue and the hump for food, and the bones were left to bleach in the sun. Years afterward these bones were gathered and sent to factories where they were ground and made into carbon and fertilizer. It is said that the bones of thirty million buffalo were gathered and shipped to fertilizer factories. The great herds of buffalo that Lewis and Clark saw on their trip over 130 years ago have long since gone.

The Indians of the plains. The Indians that Lewis and Clark found on the prairies and plains were quite different from those that Captain John Smith found in the woods of the East. Except in winter, when they camped in some sheltered place, these plains



From the painting by Russell in the Montana state capitol, Helena

Fig. 411. The Indians gather for a council with Lewis and Clark. The Indians were fine horsemen.

Indians had no permanent villages. They raised no crops, for they had no iron tools with which to cut the heavy sod. They killed the buffalo for food, and covered their tepees, or tents, with buffalo skins. Their canoes were made of buffalo hides stretched over frames made of poles. One traveler tells how the Indian made use of the buffalo:

Besides meat, the buffalo furnishes them with nearly all they desire. The brains are used to soften the skins when they are tanned, the horns are used for spoons and cups, the shoulder blades to dig the ground. The tendons are used for thread and strings for their bows, and the hoofs to glue feathers to arrows and clothes. From the tail they make ropes; from the wool they make belts and ornaments. The hide furnishes them with shields, tents, moccasins, and blankets to keep them warm.

When the great herds moved from one place to another in search of food, the Indians packed up their tepees and followed. For these shifting tribes of Indians the tepees were just the thing, for they could be easily

moved. When the Indians moved, the boys brought the ponies to the camp. As wheels were not used, the squaws fastened a stout pole on each side of a pony so that the poles stuck out behind and dragged on the ground. Other poles were laid across these two and tied fast. This made a small platform. On this platform were tied the tepees, blankets, and other belongings (Fig. 412). Sometimes children and old people rode on these rude sleds. The largest dogs also hauled loads on this same kind of sled.

For hundreds of years these Indian tribes had used only dogs as beasts of burden. There were no horses in America before the



Fig. 412. We have our food and clothing brought to our cities and homes. The Indians of the plains had to follow the buffalo and other animals to get the meat and the skins for their food and clothing.



U. S. Geological Survey

Fig. 413. As the explorers traveled northward and westward up the Missouri into the Dakotas and Montana, the river banks became higher. They had left the flat country to the south and entered a region of vast, rolling plains with long, low ranges of hills.

white men came. But when the Spaniards came to Mexico 300 years before the time of Lewis and Clark, they turned some horses loose, or lost them. In time there were herds of wild horses on the plains, and the Indians captured them and learned to use them.

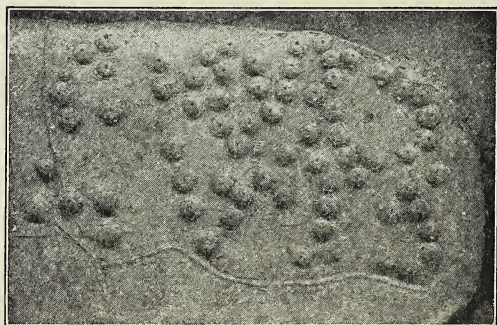
A council with the Sioux. After the big council with the Indians at Council Bluffs, Lewis and Clark moved on up the river to the home of the Sioux Indians. Look up Sioux City on the map. You will see that it is located just where the Big Sioux River flows into the Missouri. Here Lewis and Clark held a council with the Sioux chiefs and warriors. These Indians had not been friendly with the white people, but Lewis and Clark won them over by the friendly way they dealt with them and the fine gifts they made them. Captain Lewis chose five chiefs and gave each one a medal and other presents. To the head chief he gave "a red-laced coat, a fine cocked hat with a red feather, an American flag, and a white shirt." To the Indian who won a shooting match with bow and arrows he gave beads. The explorers were interested in the necklaces of "white bear claws, some of the claws three inches long," which the Indians wore. These claws came from the grizzly bears. Our men were

to meet some of these great bears later.

The winter at Fort Mandan. By late October our explorers had traveled sixteen hundred miles from St. Louis. The mornings were frosty, and there was snow in the air. They had reached a place about sixty miles north of where Bismarck and Mandan, North Dakota, now stand. The Mandan Indians, who lived here, were friendly and were different from the other tribes along the way. They cultivated the ground and

raised crops, and were quite skilful as pottery makers. Instead of living in skin tepees, they made huts of clay plastered over a frame of poles and brush. The tops were round, with a hole in the center to let out the smoke (Fig. 414). There were other tribes living along the river here; they too were friendly to the white men.

Captain Lewis decided to stop here for the winter. He first called a council of the Indians and told them of the Great White Father in Washington. He then made them presents of clothes, flags, beads, and an iron mill for grinding corn. This mill pleased them, and they were quite willing to have the white men spend the winter with them.



Courtesy North Dakota Historical Society

Fig. 414. The Mandan village of clay-plastered huts

The white men built their huts near the Indian village and named the place Fort Mandan. During the winter they worked on their huts, kept the ice away from their boats, chopped wood for their fires, and hunted. Parties of hunters went out every day to get game for food. The weather was so cold that the men who were on guard around the fort were changed every half hour. Even then some of the men's hands and feet were frozen. Lewis and Clark took time to write reports of the journey to send to President Jefferson. Captain Lewis wrote one report on birch bark. Copies were to be given to each of several messengers so that there would be a better chance of one being saved in case of accident.

Early in April Lewis and Clark were ready to move on. They sent thirteen men back to St. Louis in the largest boat with the reports for President Jefferson. The boat carried samples of plants and soils, furs, Indian articles, and relics that had been gathered on the way. As the big boat floated away on its return trip, the men on the bank called out, "Don't let the Sioux Indians get your load." The messengers reached St. Louis safely, and took the reports and samples on to President Jefferson at Washington.

Sacajawea, the Bird Woman. Lewis and Clark needed someone to go with them who knew the Indians in the mountains and could talk with them. One day there had come to visit them at their camp a bright little squaw named Sacajawea, which means Bird Woman. She belonged to the Snake Indians, who lived on the other side of the Rocky Mountains. A few years before, she had been stolen from her people by a tribe that lived near the Mandans. Her captors had sold her as a



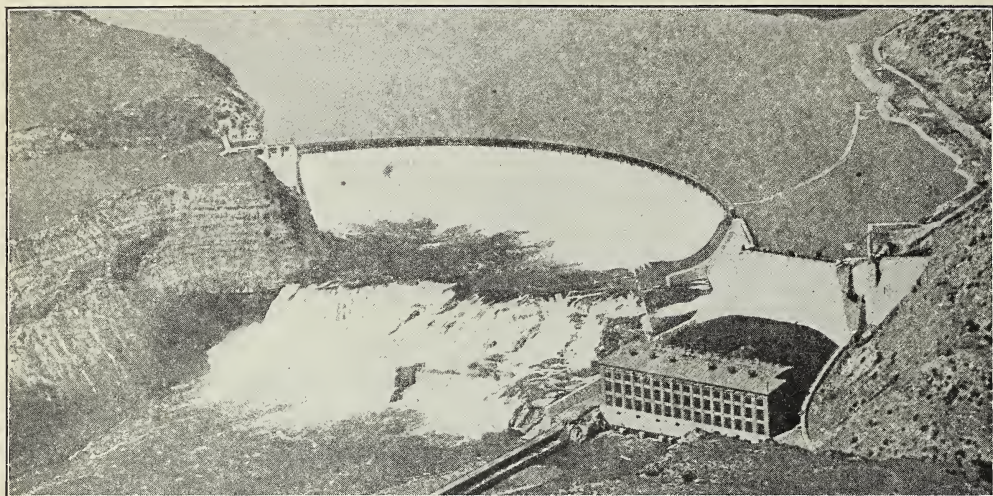
North Dakota Historical Society
Fig. 415. Statue of Sacajawea on the state capitol grounds, at Bismarck

slave to a French trapper, Charboneau, who had married her.

When Lewis and Clark came, she was curious about them. She was pleased with the little iron mill they gave her to grind corn, and came often to the fort. The white men had learned to like the happy, pretty little squaw, and Captain Lewis was anxious to take her along as a guide. He thought she would be a great help in making friends with the Snake Indians and would be able to show them the trail across the mountains. Then, too, he knew that if an Indian squaw were with them, the Indians would see that the white men were not a war party. The Indians did not take their squaws with them when they went on the warpath.

So when Lewis and Clark left Fort Mandan, Sacajawea and her husband went with them. She was the only woman in the party. With her two-months-old papoose on her back, she traveled all the way to the Pacific Ocean and back. The men were glad to have her along. She was a great help to them. One day a sudden gust of wind tipped over the large boat in which most of the supplies were carried and nearly spilled all of Captain Lewis's precious papers into the water. The quick Indian woman was the one who saved them.

On up the Missouri. The party soon came to the mouth of the Yellowstone River, and camped there. For a day or two they explored the country around. As far as the eye could see, there were vast, treeless prairies covered with short, wiry bunch grass that came to be known as buffalo grass. But this country was not flat like the Great Plains farther south. There were long, low ranges of hills which made the country seem to roll away into the distance like great waves.



© W. Preston Wright

Fig. 416. The Great Falls of the Missouri today. To what use have the waters of this falls been put since the days of Lewis and Clark? The city of Great Falls, Montana, has grown up near here.

They set out up the Missouri again and journeyed several hundred miles through what is now the state of Montana. Rowing the boats was now harder than ever. The country was beginning to rise toward the mountains, and the current in the river was much swifter. Sometimes there were sudden storms of hail and rain or of wind and dust. Often for days it would be impossible to get good water to drink, and the men would be sick from the bad water they had to use.

The Great Falls of the Missouri. One day Lewis was on the river bank alone when he heard a steady roar several miles away. He did not know what caused it; so he set out in the direction of the sound. It grew louder and louder, until he came to the Great Falls of the Missouri (Fig. 416). The spray rose like a cloud of smoke, and in the foaming waters were all the colors of the rainbow. Lewis had watched the falls for some time when he spied a herd of buffalo and shot one of them. Before he

had time to load his gun again, he saw a big grizzly bear not fifty feet away. His gun was of no use to him now. He knew that he had to get away quickly; so he turned, jumped into the river, and the bear went away.

The men had a hard time getting around the rapids and the falls. They built little low wagons to carry the baggage and canoes which they had to haul for eighteen miles overland. For three weeks they worked in the hot June sun, in hail storms, and in thunder showers. Their moccasins wore through, and their feet were cut on the rocks and the rough ground. Today the city of



Fig. 417. The kind of country the explorers saw along the Missouri in North Dakota and Montana

Great Falls, Montana, stands near this place.

They reach the Rockies. At last they were ready to take up their journey again. On they went until they could see, far ahead of them, the snow-clad tops of the Rocky Mountains. The river was now becoming shallower, narrower, and more winding. Early in August the party reached a place where the river divides into three branches. Sacajawea jumped up and down with joy. She had seen this place before. They followed the largest stream and soon came to the place where the stream had cut through the mountain. There were great, high rock walls on each side. Captain Lewis called this the "Gates of the Rocky Mountains," and named the stream the Jefferson River.

They were now high up in the mountains, and the nights were very cold. Game was scarce, and the men were often hungry. They knew that they must find the Snake Indians before winter overtook them. At last the stream became only a small clear brook that a man could step across. They had traveled 3000 miles on that stream and had come to the beginning of the Missouri River.

OVER THE MOUNTAINS AND DOWN THE COLUMBIA

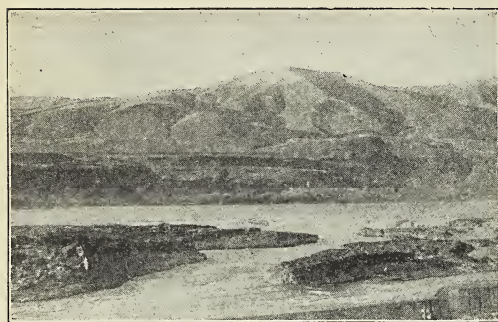
Up into the mountains. The explorers now left their canoes and followed an Indian trail on up into the mountains. They thought they must now be at the top of the Rocky Mountains and at the edge of the Louisiana Territory. But of this they could not be sure, because, you see, the Rocky Mountains are not just one ridge. This great range is made up of a great many mountains, and the distance across them is many miles. So before our men could be sure that they had reached



From the painting by Paxson in the Montana state capitol
Fig. 418. Sacajawea with Lewis and Clark at the three forks of the Missouri. At the right is Sacajawea's husband, Charboneau.

the top of the mountains, or the Continental Divide as it is called, they knew that they must find a stream that flowed to the west. Even though the party might have come to the western side of the Louisiana Purchase, they could not stop. They had orders to explore the country to the Pacific Ocean. This northwest country between the Rocky Mountains and the Pacific Ocean was known as the Oregon Country, and both England and the United States claimed they owned it. It now makes up the states of Washington, Oregon, and Idaho.

The Oregon Country. Many, many years before the time of Lewis and Clark, the Spaniards had, at different times, sailed along the west coast of America as far north as the Oregon Country. Sir Francis Drake, the English explorer, in his ship the *Golden Hind*, had visited the coast on his voyage around the world. Other English explorers had sailed into Puget Sound; so the English claimed the country. From Indians even far east around the Great Lakes, white men had heard of a great river flowing into the Pacific. It was called the Oregon and is now the Columbia. Some of the explorers told many tales about the country. They said that a great river connected it with rivers to the east, which formed the famous passage to



James Sawders

Fig. 419. The falls of the Columbia River at Celilo, Oregon.

India for which Henry Hudson and others had searched. But no one was able to find its mouth. Jonathan Carver wrote a story of a supposed trip across the continent. Carver did not go across the continent, but he did use the name "Oregon" for this River of the West. And so that is how the country along the river had come to be known as the Oregon Country.

In 1793 Robert Gray went from Boston, around South America, to the coast of the Oregon Country to trade for a shipload of furs to be sold in China. Captain Gray found the River of the West which the others had missed. He sailed up the river for several miles and re-named it the Columbia in honor of his ship. So the United States, as well as England, claimed the Oregon Country, and Jefferson had told Lewis and Clark to find out more about it.

Lewis reaches a river to the west. Lewis and Clark pushed on into the mountains until finally they came to a stream of clear sparkling water flowing to the west. They had reached the top of the continent, the divide between the great Mississippi Valley and the country to the west. They hoped this stream was the headwaters of the Columbia River, but it was not the Columbia. It was, instead, a little river we now call the Lemhi, which flows into the Salmon River. The Salmon flows into the Snake and the Snake into the Columbia River. Study the map (page 294)

and notice how near together are the sources of the Missouri and the Salmon. But the explorers were to learn that they could not follow the Salmon River to the Columbia.

Meeting with the Snake Indians. The next day as Lewis was walking along an Indian path down the mountain side with Sacajawea and her husband, he saw a handsome Indian on a horse coming toward him. Lewis waved his blanket in the sign of peace, and the Indian and his companions came up. Sacajawea now jumped up and down in great excitement and sucked her fingers, which was the Indian way of showing that these were her people. She was excited because the Indian chief was her own brother.

Lewis and Clark were now more than ever pleased that they had brought Sacajawea with them, for her brother and his tribe became fast friends of the white men. The chief told them that he would help them all he could, and they needed help badly. Their supply of food was running low, and not much food could be found on the mountain

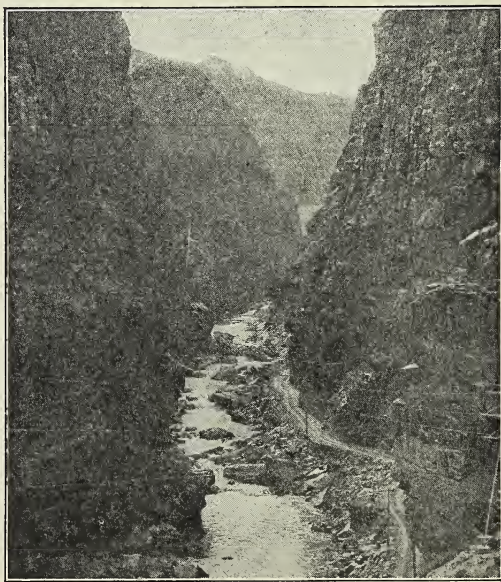


Photo by A. G. Lucier

Fig. 420. Deep canyons and rocky rivers like this made river travel impossible for the explorers.

slopes. A heavy snow storm fell, and the way down the mountains was hard and dangerous. They had left their boats, and unless they could get horses, they would have to carry all their supplies on their backs.

Across the mountains to the Snake River. Captain Clark now went on to learn something about the river and the country that lay ahead of them. The Indians told him that canoes could not be used because the river was full of rapids and rocks. They said also that no one could travel along the banks, for there were high rocky walls and snow-capped mountains on each side. Worst of all, there was no game; the only food to be found was berries and fish. But Clark was not to be discouraged. He knew that the Indians crossed the mountains to hunt buffalo on the plains. "If the Indians can get through the mountains," he said, "white men can," and he sent word to Captain Lewis that they could not float down the Salmon River but that he believed they could get through on foot, with horses to carry their goods. They got the Indians to trade them pack horses for knives and hatchets. The goods were loaded on the horses, Lewis joined Clark, and the party started on its dangerous journey. The little Bird Woman said good-bye to her brother, and strapping her baby on her back she went with her white friends.

The party was now started on the hardest part of its journey. With an Indian guide they headed north through the Bitterroot Range to find a pass to the West. The trail was often steep, and always rough and rocky. Some of the horses fell down the mountain side, and the men had to carry the loads. There was no game. The food gave out, and the men were hungry. It was only September, but they were so high up in the mountains that they suffered from cold. One morning when they awoke, they were surprised to find themselves covered with a blanket of snow. Day after day their moccasins froze and their fingers ached with cold. At



Fig. 421. Pack horses crossing a river in the mountains. How was the bridge made?

last all the food they had left was dried corn. When that was gone, they killed and cooked one of the young horses. They came to a village of the Flathead Indians, who gave them the best they had to eat; but their best was only berries and roots. Cheerful little Sacajawea was a great help. She dug roots, picked berries, and prepared the food.

Finally they came to the famous Lolo trail through the mountains, near where the city of Missoula now stands. Westward they journeyed down the last of the Bitterroots to a level country at the head of the Clearwater River. Near where the Clearwater flows into the Snake, they came upon a village of Nez Perce (Pierced Nose) Indians, who greeted the worn and half-starved explorers with great kindness. From these Indians the white men learned that they could now float down to the Pacific Ocean. But they had to stop here for a week or two and build canoes. The horses were left with an Indian chief



Courtesy Southern Pacific Railroad

Fig. 422. Indians of the Oregon Country today. Perhaps Lewis and Clark made canoes like these, dug out of logs.

and his sons, and the men started down the river again. In three days they came to the Snake River where the city of Lewiston now stands. The Snake River was wide and deep and green, and they often passed camps of Indians catching salmon. They found that these Indians had beads, copper kettles, and trinkets, showing that white men had come up the river to trade with them. Soon the party floated out upon the broad Columbia River. There were plenty of fish in this river (Fig. 424).

The Pacific Ocean, at last! The party had smooth sailing down the Columbia all the way to the Dalles, where the mighty river has cut its way through solid rock for several miles. Here the water flows over falls and foaming rapids, and the men often had to carry their boats around these places. At last they were past the Dalles with all its falls and rapids, and floating down the broad, smooth river. Now a light rain began to fall, and a fog settled over the river. Porpoises swam by the boats, and seagulls flew overhead. The men knew that they were nearing the Pacific Ocean.

About the middle of November our two captains, their men, and the Bird Woman camped near the mouth of the Columbia River. Their long journey was finished, but

their hardships were not over. The weather was cold, and rain fell nearly every day. Food was scarce, and the men were tired of the dried fish on which they had lived so long. They had hoped to find a ship at this place to take them home. But no ship was there, and they knew that they must stay through the winter. They could not start back through the mountains in winter.

The winter on the Columbia. They built a fort and cabins and settled down to spend the winter as best they could. One day the men heard that a whale had been

washed up on the ocean beach. They all rushed off to see the whale, and to get some of the meat. They told Sacajawea that she must stay at the fort, but she began to cry and to beg so hard to go along that Captain Lewis said she might go. "She said she had traveled a long way with us to see the great waters," Captain Lewis wrote, "and now that a great fish was to be seen, she thought it was very hard that she could not be allowed to see either one, the whale or the waters." So the little Bird Woman, brave and tireless, filled with the love of adventure, went with the white men down to the sea.

All that winter the white men hunted elk and deer and traded with the Indians for



Fig. 423. Grass houses, the homes of the Indians along the Columbia River

dried salmon. Sometimes when their food was scarce, they ate roast dog with the Indians. They were glad when spring came so they could start for home.

Going home. About the first of April, 1806, the boats were loaded, and the party left the fort and started up the river. This time they went straight across the mountains when they left the great bend in the Snake River. The Indians had used this road when they traveled over the mountains to hunt buffalo. When they got across the mountains, Lewis went straight ahead to the Great Falls of the Missouri. Captain Clark went farther south to the Yellowstone, and the two parties met where the Yellowstone flows into the Missouri. Together they floated down to Fort Mandan. Sacajawea had gladly followed the two captains back to the Mandan village. She had been happy to see her brother and to visit her own tribe once more, but she did not wish to stay with them. Captain Clark had become very fond of the little Indian boy, Sacajawea's baby, and wished to take him and raise him among white men. But the baby was too young to leave his mother. Later, Sacajawea and the boy came down to St. Louis. Here she lived for seven



Fig. 424. Today the white man has made salmon fishing a great business of the Pacific Northwest.

years, while the boy went to school. But both of them went back to live with Indians.

One day in the fall of 1806 the people of St. Louis were surprised to see the brave little exploring party coming down the river. Lewis and Clark had been gone two years and a half, and they had been given up for lost. The people crowded around the canoes, all wanting to hear about the western country. Lewis and Clark did not stay in St. Louis long. They hurried away to Washington to report to President Jefferson. The long two-year journey they made has been called the greatest exploration in the history of our country. What they wrote and told caused tremendous interest in the great Territory we had bought from France. Lewis was made governor of the Territory and Clark was put in charge of our dealings with the Indians.

QUESTIONS TO ANSWER

1. Tell the story of how our country got this great territory that Lewis and Clark explored.
2. Did Lewis and Clark make their journey just a few years or many, many years after we won our freedom from England?
3. What white men were in the country west of the Mississippi when Lewis and Clark explored it? What great city had already begun there as a little fur-trading post?
4. Through what gateway to the West did Lewis go with his supplies?
5. Study the maps and tell through what

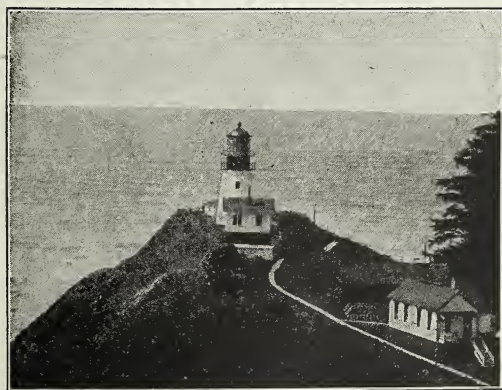
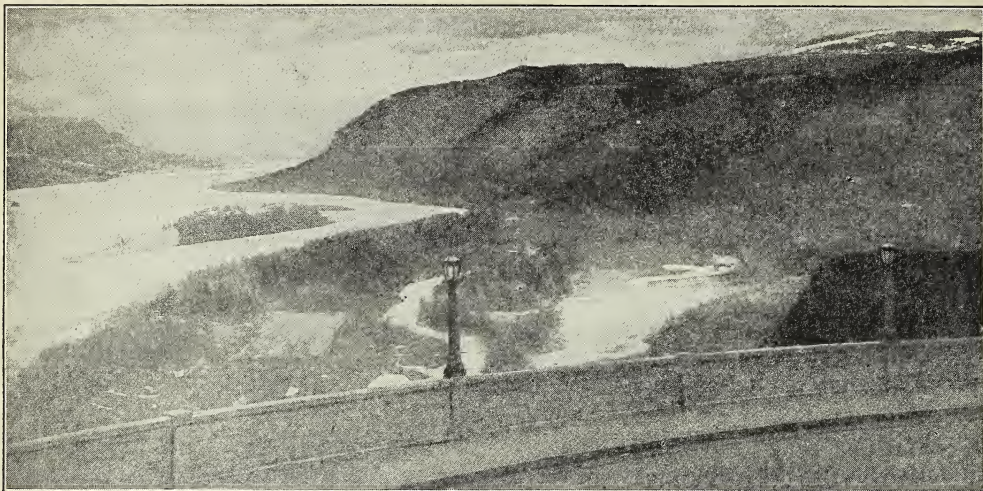


Fig. 425. This lighthouse stands on Cape Disappointment looking out over the Pacific near the mouth of the Columbia River. A disappointed explorer hunting for the Columbia River gave it its name.



James Sawders

Fig. 426. Today the beautiful Columbia River Highway runs from Portland eastward along the river.

states the explorers traveled. Between what states?

6. What city is across the river from Council Bluffs? What other cities are along the route that Lewis and Clark followed up the Missouri? 7. From the way the rivers flow into the Missouri, which way do you think the land slopes? What are the rivers that flow into the Missouri? 8. Through what kind of country did Lewis and Clark travel for many weeks up the river from St. Louis?

9. Tell about the buffalo of the plains. How were they important to the Indians? What use did the white men make of them? 10. You have learned of animals that we use for almost as many things as the Indians used the buffalo. Think hard. Can you tell about this? 11. In the way they lived, how were the Indians of the Western plains different from the Indians that the Jamestown settlers found? Where did the plains Indians get their horses?

12. Where did Lewis and Clark spend the first winter? 13. Tell the story of Sacajawea. What other Indians helped the settlers of our country? 14. Where did the explorers have to make a long portage around rapids and falls in the Missouri? What city is there today? 15. Why do cities so often grow up where there are falls in rivers? What other cities about which you have learned have grown up near falls? You should know quite a few.

16. How far had the explorers traveled from St. Louis to the headwaters of the Missouri River? 17. What do we mean by the Continental Divide?

18. What three states occupy the land between the Rockies and the Pacific in the Northwest? 19. What white men had visited the Oregon Country before Lewis and Clark? By what right did the United States claim it? 20. What great river flows into the Pacific in this region? 21. Name the other rivers the explorers found after they crossed the Rockies.

22. What was the principal food of the Indians along the rivers near the Pacific? 23. What kind of weather did the explorers find during their winter near the mouth of the Columbia? 24. How long were Lewis and Clark gone? How long does it take to go from your home to Portland, Oregon?

THINGS TO DO

1. On an outline map trace the route that Lewis and Clark followed. Put in the important cities along that route today. Label the rivers and mountains. Make a small circle around the source of the Missouri. Perhaps you can make pictures of buffalo, grizzly bears, and salmon where they were found. 2. On the railroad map find how you can travel today from St. Louis to Portland. From a railroad time-table find how long it would take. 3. You have already studied about some of the states along the Missouri. Write a little story called, "What Lewis and Clark would see today on a trip from St. Louis to Mandan." Tell about the cities, the crops, and the animals. You may have to do a little reviewing.

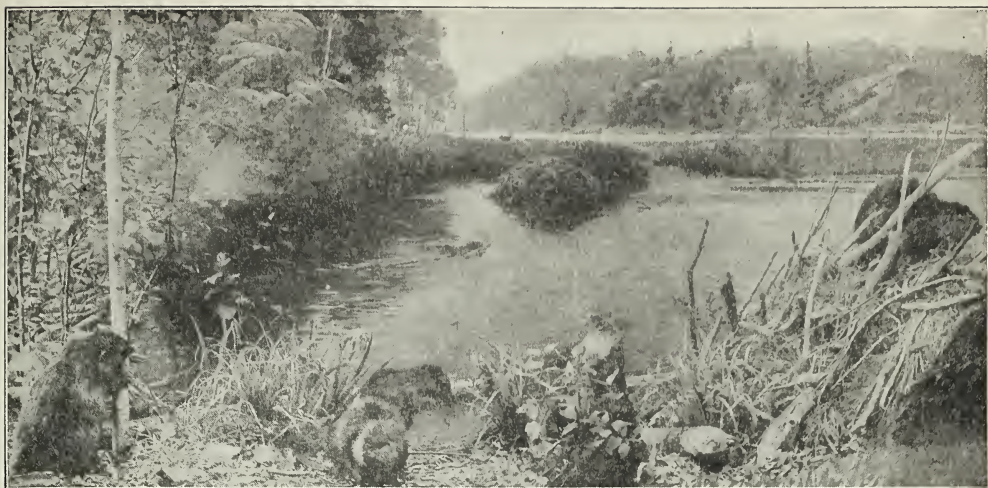


Fig. 427. A colony of beavers at work. In the stream you can see one of their houses.

Courtesy Field Museum of Natural History

FUR TRADERS, MISSIONARIES, AND SETTLERS

FURS, THE FIRST BUSINESS OF THE NORTHWEST

After Lewis and Clark explored the Missouri and the Columbia valleys, fur trapping and trading were for years the chief business in the Northwest. This trade had been important in America very early. People in Europe were eager for more furs. In the Middle Ages furs had been worn only by people of great wealth and importance. After the discovery of America, there were more furs to be had, and they became very fashionable. The French started the fur trade in Canada and the Mississippi Valley, and they had a trading-post at St. Louis. When the English drove the French out of America, the Hudson's Bay Company had the right to trade in furs. This trade grew until it had spread from Hudson Bay to the Pacific Ocean.

There were many buffalo on the plains, and bears, beavers, and other fur-bearing animals in the mountains and along the streams. After Lewis and Clark found the road over the mountains, the Americans began crossing the mountains to trap, and the fur trade of St. Louis grew rapidly. In those days beaver

skins were the most valuable of all, as this fur was used in making fine hats (Fig. 429).

The fur trappers. When you read of Daniel Boone, you learned much about the hunters and fur trappers of the early days. These trappers of the West were much the same kind of men. They wore a hunting shirt and trousers made of dressed deerskin. The shirt was decorated with porcupine quills and the trousers with fringe. Under the right arm hung powder horn and bullet pouch. Here also were carried flint and steel with which to kindle the camp fire. In his belt, the trapper stuck a long knife and a case with a whetstone in it on which to sharpen the knife. Moccasins and a leather cap completed his outfit (Fig. 407).

Trappers set their traps in every stream and pool from the Mississippi River to the Columbia. Many of the streams still bear the names the trappers gave them. Sometimes a trapper worked alone, but usually they went in parties of three or four. A trapper would follow a creek looking for signs of beaver. Perhaps he would find a cottonwood tree that the beavers had cut down by gnaw-



Visual Education Service

Fig. 428. Trapping is still a big business. On this trapper's cabin are furs stretched on boards to dry.

ing it in two with their sharp teeth. That is the way these little creatures cut trees, and they are wise enough to gnaw in such a way that the tree will fall across the stream. Then they build a dam across the stream by piling in brush and logs behind the trees. They made their homes inside this dam, but always above the water. When once the trapper found the path of beavers, he set his trap in the water where the little animals traveled back and forth.

The trapper's Indian wife took care of the beaver skins, or pelts. All flesh and fat were scraped off, and the skins were stretched over frames of willow twigs to dry. Then they were rolled up in bundles of twenty with the fur inside, and laid away until the trapper was ready to carry his load of furs to the trading post. The flesh of the beaver was not usually eaten, except the tail, which had scales on it something like those on fish. This was roasted with the scales on, and the meat was considered very delicious.

John Jacob Astor. John Jacob Astor was one of the big fur traders of the United States. Astor came from Germany to join his brother in New York, and made his living by buying furs and shipping them to England. He kept on trading in furs until he made a fortune in the business. Astor had heard about Lewis and Clark, and how they had found a way over the Rocky Mountains. He thought he could make money on furs from this new country; so he formed the American Fur Company and sent a party around South America, up the Pacific Ocean to the mouth of the Columbia River. These men built a fort and a small town which they named Astoria (Fig. 430). Another party went across the mountains to the same place. This party did not go all the way up the Missouri River. They traveled up the Platte and the Sweetwater rivers into southern Wyoming till they reached the mountains. There they found a low pass, called South Pass, through which they traveled as far as the Bear River. This river flows into the Great Salt Lake. They followed the Bear River to the place where it turns south; then they went straight ahead until they came to the Snake River. They followed the Snake and the Columbia to Astoria. The road these traders used in going to Oregon was used by others and became known as the Oregon Trail (Fig. 406). It was a shorter and easier way to the Colum-

bia River country than the way Lewis and Clark had gone.

During the War of 1812 the Hudson's Bay Company took Astoria away from the Americans. Astor's trading company on the Pacific was then broken up. However, in 1818 the United States and England agreed that for ten years both the Americans and the English should have the right to trap for furs in the Oregon Country.



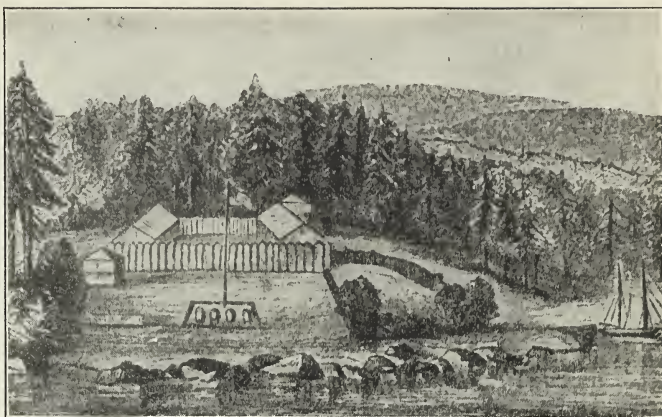
Fig. 429. Beaver fur was used for hats such as the man is wearing. The "poke bonnet" was worn by the women of those times.

John McLoughlin. A short time after this, the Hudson's Bay Company sent John McLoughlin, a Scotchman, to take charge of its business in Oregon. The company gave him the title of Chief Factor, but everybody called him Governor. For twenty years he ruled like a king; so we might well call him the King of Old Oregon. He was over six feet tall, broad-shouldered and powerful, and had snow-white hair. The Indians named him "White Eagle."

The founding of Vancouver. White Eagle built Fort Vancouver, now the city of Vancouver, Washington. He thought that the traders and trappers should have homes and that they should raise the food they must have. They were too far from Montreal to carry from there all the things they needed. McLoughlin had land cleared. Houses were built and crops and cattle raised by clerks in the office and those who were too old to go trapping. It was not long until there were 1500 acres in farms near the fort. These farmers even shipped dairy products north to the Russians in Alaska. At that time Russia owned Alaska. This was the first settlement in the Oregon Country.

From Vancouver McLoughlin sent his men out to different places to build forts and trading posts. Each party or brigade was made up of fifty or more trappers—Canadians, Indians, or half-breeds. The wives and families went with the party. The wives could cook and help care for the skins, and their presence would show the Indians that it was not a war party. All the skins were brought to Fort Vancouver before they were sent to the market to be sold.

McLoughlin's kindness. John McLoughlin's house was the meeting place for all who



Visual Education Service

Fig. 430. The fort at Astoria. Forts like these were the fur-trading posts of the Northwest and the beginnings of some of the cities.

came to the Oregon Country. If any were hungry, they were fed. If they needed clothing, McLoughlin gave them clothes. Many times from forty to fifty people sat down to the table in the great dining room. At the head of the table sat White Eagle. Behind his chair stood a Scottish piper who played the bagpipes. Beside White Eagle sat Douglas, who gave his name to the big fir trees of Washington. Then there was Tom Mackey, the story teller, and Bruce, who brought the first apple trees to Oregon and Washington. And there were the rough men who lived the wild life of trappers. Full plates of food were always ready for weary travelers from the East or across the seas.

MISSIONARIES AND SETTLERS

The coming of American missionaries. The first American settlers to go to the Oregon Country were the missionaries. The Indians began to think that it was the white man's Bible which made him smarter than the Indian; so they sent four men who had known Lewis and Clark to ask Clark for someone to tell them about the Bible. Clark was then a government officer and living at St. Louis. Clark could not send missionaries, but the visit of these Indians made the churches feel



U. S. Department of Agriculture

Fig. 431. Berry bushes in the Willamette Valley. Jason Lee and John McLoughlin were wise when they told settlers to come here. Today this rich Willamette-Puget Sound Valley is noted for its fruit, grain, and dairy cows. Find it on the map (page 294).

that they must help the Indians. Early in the year 1834, about twenty-five years after the time of Lewis and Clark, a party of missionaries set out from Independence, Missouri, on the long journey over the Oregon Trail. Jason Lee headed this party. McLoughlin received them kindly and advised them to settle in the Willamette Valley. So Lee started a mission and settlement near where Salem, Oregon, now stands. During the next few years Jason Lee did a great work in directing the missions, urging new settlers to come, and arousing in the people of the East an interest in the Oregon Country.

In 1835 Dr. Marcus Whitman set out from St. Louis for the Oregon Country, but before the party had reached the Columbia River, Whitman felt that he must go back East to get more missionaries. While he was in the East, Whitman married, and when he started west again, he and his friend Henry Spaulding took their wives with them. These were the first white women to cross the continent to Oregon. The women stayed at Fort Vancouver while Whitman built a house and started his mission in southeastern Washington near

where Walla Walla now stands. Spaulding built a mission near Lewiston, Idaho. Other missionaries came, and settlers from the East. McLoughlin treated the missionaries kindly and told them where the best places were for settlements. He did not like to see the Americans come into the new country, but he was always honest, fair, and helpful to them. There were times when the Indians wanted to attack these new settlers, but White Eagle sternly told them that they must not do so, and so powerful was he that they were afraid to disobey him.

For eleven years Whitman worked hard for the Indians and the white settlers. He learned the Indian language, healed the sick, planted orchards and fields, and started schools. Mrs. Whitman taught a school for Indian boys. Then the measles came among the Indians, and they would not follow Dr. Whitman's advice. When the fever came on them, the sick Indians jumped into the river to cool off. Of course they caught cold and died. The Indians thought the white men had cast an evil spell over them, and they became hostile toward Dr. Whitman. They finally killed him, his wife, and several others.

Gold. Just before the War Between the States, gold was discovered in the country around the Clearwater River in Idaho. Then towns began to spring up in eastern Washington and Oregon, and in Idaho. Walla Walla, Washington, and Lewiston, Idaho, became busy towns. Once more the Americans were on the move to the West. Just as they had poured over the mountains into the Mississippi Valley, so now they loaded their goods into their covered wagons and began



Fig. 432. Marcus Whitman

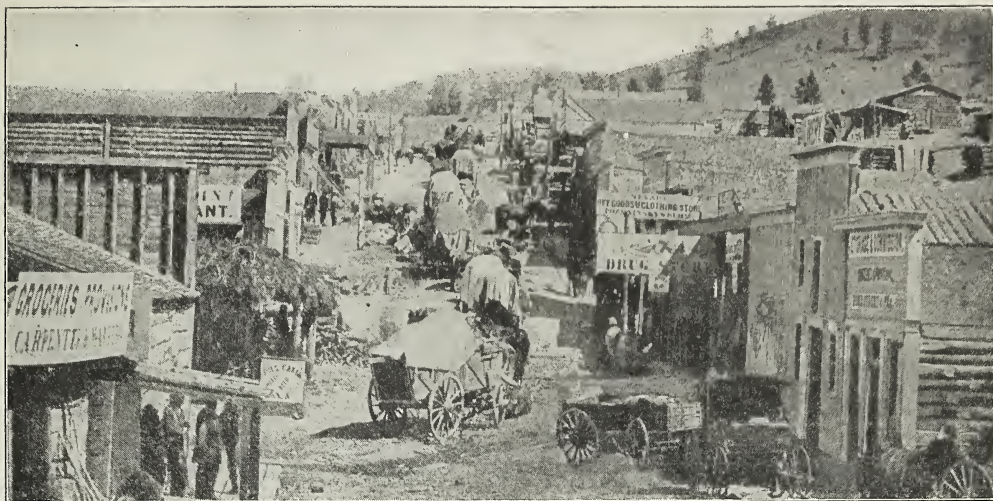


Fig. 433. State street, Helena, Montana, in the days when gold was discovered in the Northwest. Many of the fine towns and cities of the West began as little mining towns like this.

the long journey over the Oregon Trail. Soon so many American settlers had come to Oregon that it became necessary to have a government of their own. Since there could not be two governments in the Oregon Country, it looked as though we would have trouble with England. But finally England and America made a treaty which gave us all the territory that now makes up Washington, Oregon, and Idaho. McLoughlin became an American citizen, and moved to Oregon City, Oregon. If he had not been so honorable and kind, the first American settlers in the Oregon Country would have had a much harder time.

QUESTIONS TO ANSWER

1. What was for many years the principal business of the Northwest? Who had started this business and what was the principal market? 2. Tell the story of John Jacob Astor. Be ready to show on the wall map how his men traveled overland to the Columbia River. 3. What company controlled the Oregon Country for a long time? What did the Chief Factor of the company do to start the settlement of the country? 4. Tell things about this Chief Factor that will show his character, that is, the kind of man he was.

5. What people really started the Americans mov-

ing to the Oregon Country? Who were their leaders? 6. Tell and be ready to show on the map where these first Americans settled. 7. Why did fur traders not like to have settlers come into a country? 8. Tell the story of Dr. Whitman's work among the Indians. 9. What animal gave the most valuable fur? Tell of the life and habits of this animal.

THINGS TO DO

1. On your outline map of the Lewis and Clark journey, show the Oregon Trail and the settlements made by McLoughlin and the Americans. 2. Find out all you can about furs that we use today. Ask at home and look for advertisements in newspapers. Be ready to tell where the furs come from and for what they are used. 3. Write a paper or make an outline from which you can give a talk on this subject, "How rivers have helped in settling and building our country." You will have to do some thinking and perhaps some reviewing.

Books to read: Barker, Dodd, and Webb, *The Story of Our Nation*, pp. 209-222, 254-264; Burnham, *Hero Tales from History*, pp. 247-257; Davidson, *Founders and Builders of Our Nation*, pp. 109-116; Logie, *From Columbus to Lincoln*, pp. 175-182; Nida, *Following the Frontier*, 217-231, 274-279; Tappan, *American Hero Stories*, pp. 207-217; Woodburn and Moran, *The Makers of America*, pp. 189-207.

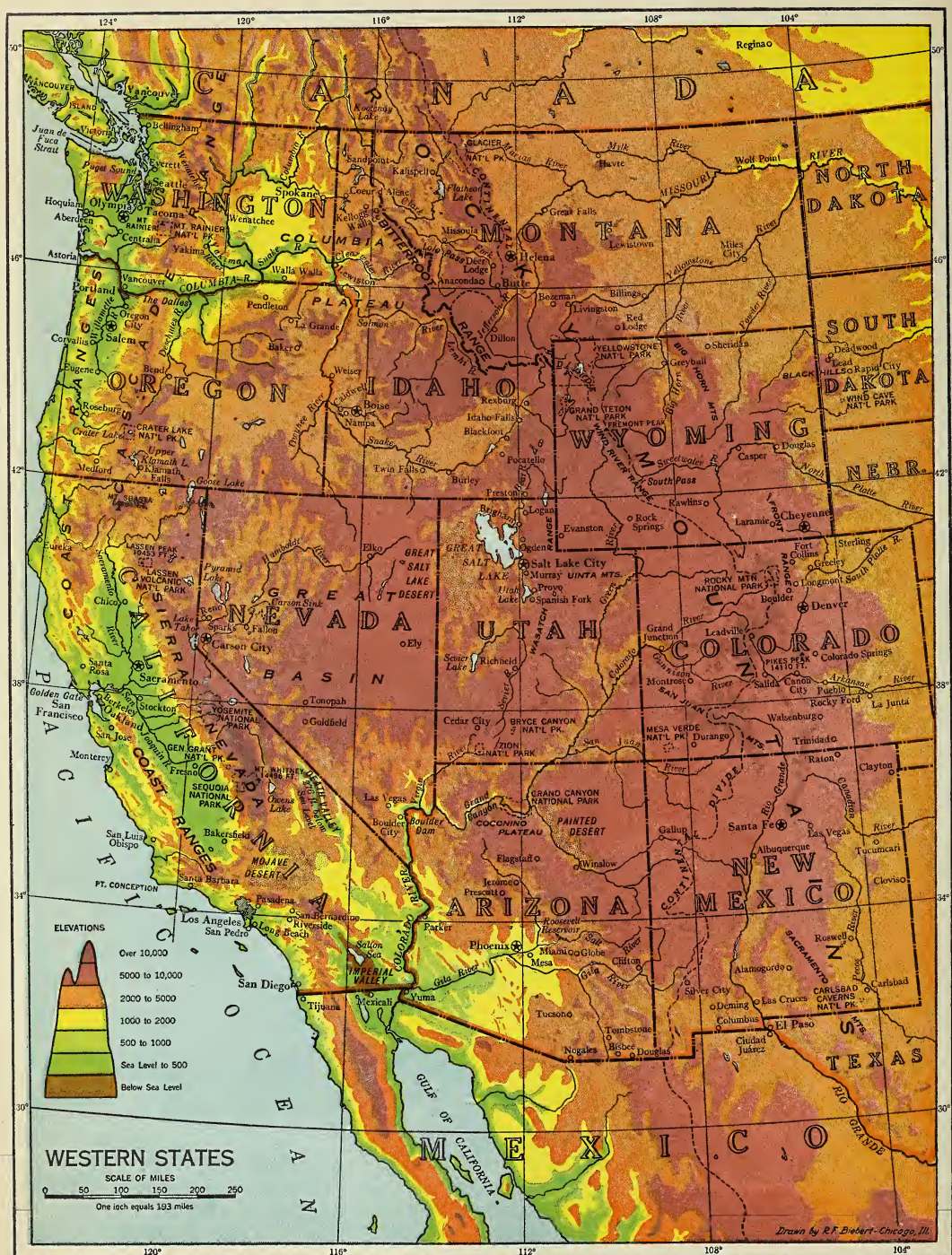


Fig. 434. Map of the Western states



Fig. 435. A sheep-herder with his dog and flock on a northern Wyoming ranch
© Belden, from Underwood and Underwood

A SUMMER ON THE GREAT PLAINS

A SHEEP RANCH ON THE GREAT PLAINS

A trip to the Northwest. Mary and her brother Bob lived in the city of Philadelphia. It was late June, near the close of school, and they were wondering about their vacation. One evening at dinner Mr. Allen said, "Your Uncle Harry has made a big deal in timber in Washington. He wants me to come out and help him to start a lumber company. I think I shall go. I can take you along with me and leave you with my old friend, Mr. Harper, who lives on a ranch near Billings, Montana." It was decided that the children should go with their father; so they got railroad time-tables and folders and studied the railroads over which they might travel. They found that they were to go by way of Chicago and Minneapolis. Turn to the railroad map and find the railroads over which they might travel. Could they have a choice of railroads?

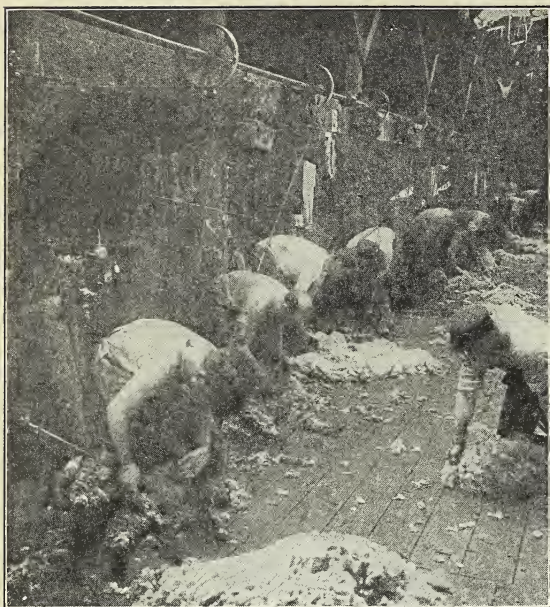
Soon the day came to start, and they were off on their long journey to the "Wild West" of which they had heard and read so much. Chicago with its tall buildings and its busy streets made them think of their own city and of New York. Then they were off for Minneapolis with its flour mills. They began to think they were really "out West" when

they left Minneapolis and came to the miles and miles of level wheat fields of the Red River Valley.

"Lewis and Clark camped near here the first winter of their trip to the Northwest," observed Bob, as they crossed the Missouri River at Bismarck. "No wonder they named this the 'Big Muddy'; it is the muddiest river I ever saw," said Mary. "I wonder whether it is ever clear." "I have been traveling on this road for several years," said one of the passengers from Bismarck, "and I have never seen it clear."

Bob and Mary noticed that the farm houses were farther and farther apart all the way from Bismarck to Billings. They also noticed that the grass looked thin and brown. The passenger from Bismarck told them that the grass was thin and brown because it does not rain so much here as it does farther east. They began to see great herds of cattle, flocks of sheep, and fields of wheat, rye, flax, oats, barley, and potatoes.

Arrival at the ranch. Just before night-fall the Allens reached Billings, where they were met by Mr. Harper and his son Jack. Mr. Allen bade Bob and Mary good-by and promised to return for them about the first of September. The train pulled out, and Mr.



© Keystone View Co.

Fig. 436. A busy day for the sheep-shearers. The man at the right is bundling up a fleece.

Harper hustled the children into his car and took them to his ranch twenty miles north of Billings. Next morning the children were up with the sun, for they were to have their first sight of a sheep ranch. They found the house to be a two-story building set well back from the highway. Rows of shade trees lined the driveway, and everything was clean and orderly. The bunk-houses, as the sheep-herders' homes were called, were off to one side. Beyond the garden were the barns and sheds, and beyond these were the corrals, or sheep pens; and then the great, open range for the sheep.

"Sheep, sheep everywhere," thought Mary and Bob. They had never seen so many sheep before in their lives; and they could hear them as well as see them. The lambs and their mothers were bleating and calling to each other all at once. The lambs were from a month to two months old. They looked like the pictures of Mary's little lamb in the story books.

Shearing the sheep. It was shearing time, and the sheep were to have their warm winter coats taken off before being driven to the summer pastures. The shearing was done in a long shed divided into pens. In each pen was a pair of clippers, a little larger than those the barber uses. Each pair of clippers was fastened to the end of a long flexible tube. This tube was connected with a steel shaft which ran overhead. A gasoline engine at the end of the shed supplied the power to turn the shaft. The sheep were driven down a long passage-way to the pens by the herders, or "wranglers," as they are called, and a swinging gate let one sheep at a time pass into each pen. The shearer held the sheep down on the floor, as you see in Figure 436. The clippers moved smoothly and quickly under the wool, and in a very few minutes each sheep looked queer and bare without its thick, curly coat. As

the mother sheep left the pens, they called to their lambs. Each lamb was able to recognize its mother in spite of her changed appearance.

"How many sheep can you shear in a day?" Bob asked one of the shearers. "One hundred twenty-five to one hundred fifty, if people do not talk to me too much," he replied. Mr. Harper showed Bob and Mary how the fleece from each sheep was rolled up, tied, and thrown into a car that came by the shed. Each fleece hangs together in one piece because the hair is so curly and tangled. The children rode on this car to the barn where they saw the fleeces packed into bags ready for the buyer. Mr. Harper said that a man would be there in a few days to buy the wool, which would then be shipped to the market in Chicago.

Pasturing the sheep. After the sheep were all shorn, one day after another passed without anything in particular happening. Mr. Harper seemed to be waiting for something. Bob asked him what was the matter. "The



Photo by Cowling. Courtesy U. S. Forest Service

Fig. 437. A flock of sheep grazing on pasture lands in one of our national forests

sheep are taken to the mountains to pasture during the summer," replied Mr. Harper, "and I am waiting now to be sure that summer has come. We have taken off their warm woolen coats, and the sheep would die if they should be caught in a late snowstorm. The lambs, too, would die. I have rented a big tract of national forest from the government, and I will send the sheep there as soon as I think it is safe."

"I do not see how the sheep could find pasture in a forest," said Bob, "and I should think wild animals like bears and wolves would catch them." "Oh, there are many open spaces in the forest, and the government finds that the sheep are useful to keep down the weeds and grass. To be sure, the sheep must be moved often," answered Mr. Harper. "Of course, coyotes and mountain lions do catch a few stray sheep and lambs now and then, but the hunters have killed most of the wild animals. Besides, it is the herders' job to look out for them." "I thought lions were found only in Africa," said Bob. Mr. Harper smiled and said, "Well, these mountain-lions are not so large and fierce as the African lions, but they like to steal sheep."

Just after the sheep were shorn, Mr. Harper had sent trucks with supplies and a

few of the wranglers or herders to the mountains to make the camps. Then one morning he gave the word to start. Each herder took about two thousand sheep. Mary noticed that there were about twenty black sheep in each flock. "She asked Mr. Harper why he did not put all the black sheep in one flock. "We have one black sheep for every hundred white ones," Mr. Harper replied, "and the white ones will usually stay with their own black sheep. Each of my herders can count his twenty black sheep without much trouble. So if a black sheep is gone, he always looks for the white sheep that belong with it."

This was all so interesting to Bob and Mary that they wanted to go with the herders, but Mr. Harper told them that it would be best to wait a while. You see, the sheep travel slowly so that the lambs can follow. So Mary amused herself with the collie pups that Sam, the hired man, was training to be sheep dogs. Sam told her that it would be almost impossible to handle so many sheep without the dogs. One sheep dog will round up several hundred sheep, and he will bring out of the flock any sheep the herder wants. A good sheep-dog is very valuable. Mary learned that great care and patience are taken in the training of the young dogs.



Fig. 438. A sheep-herder and his dog

Mr. Harper told the boys, Bob and Jack, that they might have two of the horses to ride if they wished. Of course this pleased Bob, and he put on the cowboy suit he had brought. Jack laughed and told him that cowboys and sheep-herders now wear overalls. But this did not bother Bob; he wore his suit just the same. The boys had great times riding over the plains. Bob was thrown a few times, but he was only scratched and shaken a little. Mary, too, wanted to ride with the boys; so Mr. Harper let her have a pony.

One day the children rode to Mr. Warren's farm, a few miles from Mr. Harper's ranch. Mr. Warren had a few sheep that he kept on his farm all year. These are called farm sheep. Those sent a long distance from home to graze are called range sheep. Study the map (Fig. 439) and you will see that more sheep are raised in the Western states than in any other region. Mr. Harper had a range of several thousand acres, and

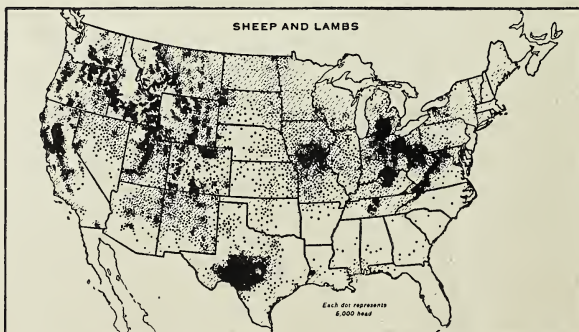
sheep raising was his principal business. But Mr. Warren raised wheat, alfalfa, potatoes, cattle and hogs, and only a few sheep. His farm was in the valley, and the soil was richer than that on Mr. Harper's ranch. He had only a few hundred acres to farm.

CATTLE DAYS ON THE GREAT PLAINS

The Great Plains country. At Mr. Warren's farm Bob and Mary saw "Uncle Joe," who was the handy-man about the farm. His work was to feed the chickens, tend the garden, and do other small jobs. He had time to sit outdoors in the sunshine and tell stories of the old days to any visitors who might come. Uncle Joe thought the farm was a pretty tame place. In his younger days he had been a cow-puncher, or cowboy. He told the children the story of the Great Plains from the days of the Spaniards and the buffalo to the farmer and the cattle- and sheep-men of today.

"Young lady," said Uncle Joe, "suppose you run to the house and get me that map of the United States. I went to school quite a bit when I was young, and I learned to use a map. It's a good idea to show anyone a map of the country you want him to know about.

"Now," said Uncle Joe, "do you see the flat country west of the Mississippi? (Map, Fig. 406.) That is what we call the Great Plains.



U. S. Department of Agriculture

Fig. 439. What three states east of the Mississippi raise many sheep? Where does the wool go to be made into cloth?

Just name the states that are in this region. They are only halves of states, aren't they? Did you ever notice how the states west of the Mississippi River lie in rows? Made that way, I guess, so boys and girls can remember them better. Now that first row of states along the Mississippi River has plenty of rain; and the same way with the eastern half of the next row: the Dakotas, Nebraska, Kansas, Oklahoma, and Texas (map, page 16). There is less rain as we go west. Along about the middle of the second row the rain is so scarce that trees do not grow, and that is where the Great Plains start. Now this whole Plains country is about the same, except that it is hot most of the year in Texas and cold, or cool, most of the year in Montana."

"Did you ever see any herds of buffalo, Uncle Joe?" asked Bob. "Yes sirree!" exclaimed Uncle Joe. "I remember seeing herds of buffalo as large as any you have ever read about. In those days the buffalo roamed over these plains by the millions. As they were killed off, the cattle increased." "Where did the cattle come from? Were they always here?" Mary questioned. "No," replied Uncle Joe, "the Spaniards brought both cattle and horses with them when they came to ex-



Fig. 440. A cattle round-up on the Great Plains

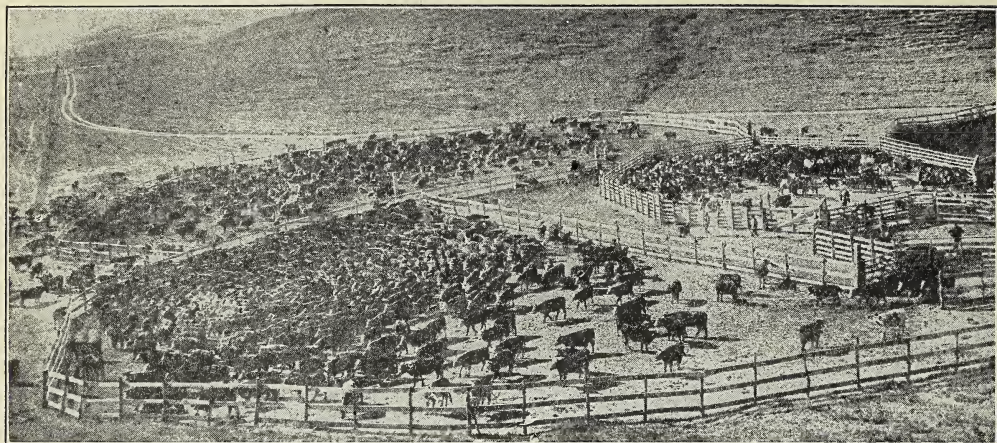
plore the southern part of our country. As you will learn, the first Spaniards who came into Texas from Mexico had a hard time, and were glad to get away," said Uncle Joe. "They left their cattle and horses, and from those few cattle and horses grew the great herds that were later found on the plains in Texas. Those cattle had long horns. Everything they ate seemed to go to horns, and they did not furnish so much good beefsteak; but how they could run!

"From the Spaniards the Indians learned how to ride horses. The Indians of this region were using horses when Lewis and Clark took their little trip up the Missouri River," continued Uncle Joe. "In my young days we used to find many herds of wild horses—mustangs, we called them. Sometimes we called these wild ponies broncos. When we needed a horse, we lassoed a wild one. We called taming a mustang "bronco-busting."

"Tell us about the round-up," exploded Bob. "Hold your horses, young man, and sit down on that bucket," commanded Uncle Joe. "You see, the cattle business started in Texas, where the Spaniards left the first cattle. The first cattle-men killed them for their hides and tallow or fat. The markets for meat were too far away. Finally a few cattle-men tried driving a bunch of fat steers to Illinois to market. They did not sell for much because they had walked off all their fat. And then it was learned that cattle



Fig. 441. Cowboys "busting" a bronco



© Underwood and Underwood

Fig. 442. Rounding up the cattle in corrals ready for shipping to the meat-packing cities

could live through the winter and grow fat on the bunch grass of the plains. One time a trader who was hauling goods across the plains with an ox-team was caught in a snow storm in western Kansas," continued Uncle Joe. "He turned the oxen loose, covered his wagons the best he could, and rode away. In the spring he came back expecting to find only the bones of his oxen, but to his surprise they were alive and fat. From that time on the cattle-men drove their cattle from Texas to the plains farther north to fatten them before driving them to market. Plenty of help was needed on these long drives, and that is where the cowboy came in," continued Uncle Joe. "About this time the Union Pacific Railroad was built. Soon other railroads stretched across the plains, and towns grew up along the railroads. Cattle could then be shipped from these towns. Omaha, Kansas City, Abilene, and others started in this way."

The round-up. "What about the round-up?" urged Bob. "Aren't you going to tell us about that?" "Coming to that right now," said Uncle Joe. "You see, it was this way in those days: All the land from Texas to Canada was 'cow country' and 'free-grass' country. There was not a fence for 1500 miles—nothing in the way but the rivers. The grass belonged to anyone who had cattle to eat it.

Of course the cattle got mixed up. If your collie pup had to be turned loose with a thousand other collie pups, how would you make sure that you would know him?" asked Uncle Joe. "I would mark him, of course!" exclaimed Bob. "Well," said Uncle Joe, "that is just what the cattle-men did with their cattle on the range. Each man had a different mark, or brand. When the time came to brand the cattle, they were lassoed, and the red-hot branding iron was held against the skin. Then the cattle were turned loose on the range, and the cowboys drove them slowly north on the trail. Sometimes, especially at night, the cattle became frightened at a wild animal or perhaps a storm, and they would start running. That was a stampede. Then the cowboys had to ride along near the leaders of the herd and try to make them run in a circle. As they got tired, the cattle ran slower and slower and finally quieted down.

"By the time winter came, the cattle had wandered far to the north and grazed on the land as they moved. They were turned loose to fatten until spring. The grass in Kansas and Nebraska was thicker and more plentiful than in Texas, and the cattle could fatten while moving nearer the markets. When spring came, the different herds were all mixed up. Then came the round-up!

"Cowboys from all the different herds, or outfits, went out together and rounded up, or drove together in one place, all of the cattle in that section. Then they cut out, or separated into herds, each owner's cattle, which they could tell by the brands. Each owner then branded his calves. The cowboys had to use their lassos to catch the lively rascals. Some of the calves had lost their mothers, and no one could tell to whom they belonged. Such calves were called 'mavericks,' and were divided among the different cattle owners. My, but those were great days, with plenty of hard work! Many are the times that I have been in the saddle for forty-eight hours, and with very little to eat!

The end of the cattle days.

"For about twenty years or so cattle were driven on the Long Trail, and the cowboy was in his glory. Then a fellow by the name of Joseph Glidden invented barbed wire. Different cattle-men fenced in big ranges with that stuff and ordered everyone else to stay out. Then the railways were built farther west, and new settlers came and fenced in farms all along the border of the plains. These settlers had a hard time at first. The grasshoppers ate most of their crops, and dry, hot weather burned what was left. We cowboys laughed at them. We thought the plains were too dry for farming, and just knew that they would have to quit; but they stuck.

"The worst thing that ever happened to the cattle business was when some herders found that sheep could live better on short dry grass than cattle could. The sheep-men brought in their flocks and tried to let them run on the range. Of course the cow-men



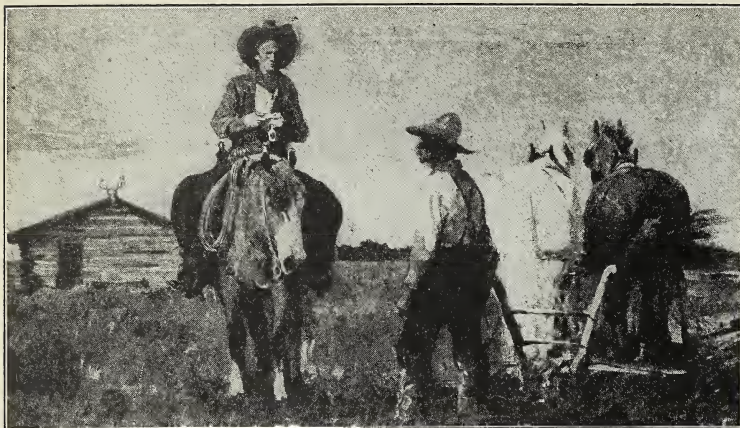
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Fig. 443. A busy day branding calves at a Texas round-up

tried to drive them off, and there were some pretty bad fights," said Uncle Joe.

"Why should the cow-men hate the sheep-men so much?" asked Bob. "Well, you see," explained Uncle Joe, "if sheep were kept too long on a pasture, they would eat the grass down close; they would even eat the roots. Then nothing would grow for a long time. Because of this, sheep-men have learned not to leave the sheep too long in one place. Then too, cattle will not eat grass over which sheep have run."

Uncle Joe looked sad as he said: "But the good old days are gone forever. The cowboy has come down in the world. See that fellow in overalls? He rides nothing but an old plug of a horse. Instead of a six-shooter and a lariat, he carries wire, hammer, and staples for fixing the fence if it needs it. This afternoon he will milk some of the cows. In the old days no cowboy would milk a cow. It



Courtesy Swift and Co.

Fig. 444. When the farmer came to put up his wire fences and plow the land, the old days of free cattle range from Texas to Canada were over.

is that fellow's job to ride along the fence on the ranch the other side of that ridge."

Dry farming. "Nowadays the plains are cut up into cattle ranches, sheep ranches, dry farms, and irrigated farms, with some few ranges left in spots," said Uncle Joe. "What do you mean by dry farms?" asked Bob. "It is a funny idea," said Uncle Joe, laughing. "A farmer plows a big field, but doesn't sow or plant anything on it. When weeds start to grow, he kills them. He may have to kill several crops of weeds during the summer. The farmer will tell you that if he allowed the weeds to grow they would take the water out of the soil and leave it as dry as if he had grown a crop. In the fall or spring he will sow wheat or other grain, knowing that he has stored in the soil part of the water needed for a crop. Usually, with this method, he can raise but one crop in two years."

Custer's last fight. "Were you ever in any Indian fights, Uncle Joe?" asked Bob. "Yes, son, many times," he replied. "When we couldn't run away fast enough, we killed our horses and lay down behind them to make a kind of fort. Then with our hunting knives we would dig a hole to let ourselves down a little lower into the ground. The government finally sent troops to fight the Indians

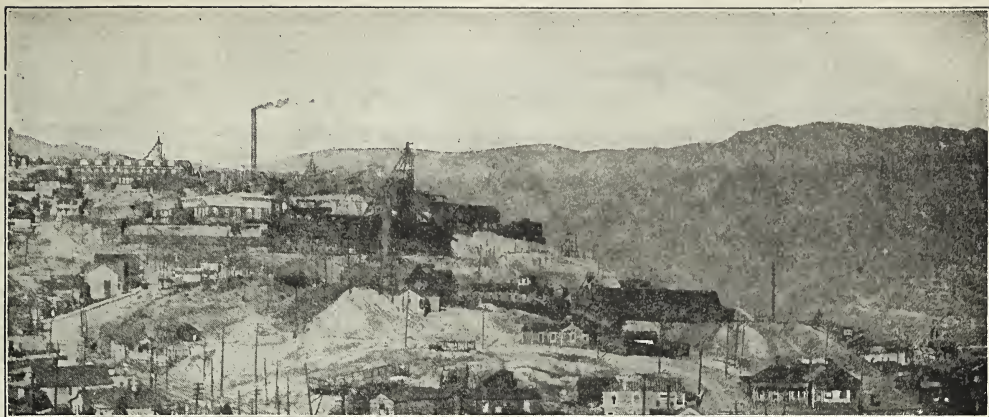
and make the country safe for settlers. About forty miles on the other side of the Yellowstone River, in the Little Big Horn Valley, is where General Custer attacked old Chief Sitting Bull and his Sioux warriors. But there were too many of the Indians, and all day long they rode round and round, shooting at Custer and his men until every white man was dead.

That was just about the last big Indian fight."

When the children got back to Mr. Harper's house, they found a letter from their father telling them to start for Spokane in three days. The summer had gone by very quickly for them. They did not want to leave. Mr. Harper planned their trip so that they would enjoy it. They were to take the night train from Billings so that they would pass through the finest scenery in the daytime.

QUESTIONS TO ANSWER

1. What crops did Bob and Mary see on the way through Montana? What animals? Locate Miles City and Billings.
2. Why are the range sheep taken to the national forests in the summer? How does the sheep-man make money?
3. Turn to the sheep map and name the states that raise the most sheep.
4. Draw a light line around the Great Plains. In what direction do the railroads run? Find two or three railroads that run somewhere near where Lewis and Clark traveled across the country.
5. See if you can give a reason why the cattle were driven north on the plains.
6. How and where are the cattle fattened today?
7. Study the map and locate several places that were markets for the cattle in the old days.
8. What stopped driving cattle in such large herds? What crops do the farmers now raise?
9. Why cannot cattle be raised on the same pasture as sheep?
10. Tell what you can about dry farming.



By Ewing Galloway, N. Y.

Fig. 445. High up in the Rocky Mountains is Butte, Montana, the greatest mining city in our country.

THE PACIFIC NORTHWEST

MINING AND FARMING

Butte, a great mining city. The next morning, just as Bob and Mary were ready for breakfast, the train pulled into a city in the mountains. "I wonder what city this is?" asked Mary. "This is Butte," answered the conductor, "one of the greatest mining towns in the world, and it sits on the richest hill in the world. First gold was found here and then silver. Marcus Daly, who had a silver mine, dug forty feet deeper into the ground and found that he had a copper mine. The copper and zinc mines soon became the most important. Sometimes as much as a million pounds of ore are mined in one day." "Is the stuff on that car some of the ore?" It doesn't look like copper to me," said Mary. "Yes, that is some of the ore," explained the conductor. "But before it will look like copper, it must go to the smelter, where the metals are smelted or melted out of the other things with which they are mixed. The ore is shipped to Anaconda, and some of the solid copper is sent to Great Falls to be made into copper wire."

The Bitterroot Range. When the train reached Missoula, the conductor told them that Lewis and Clark had passed near that

place and over the Lolo Pass in the Bitterroot Range on their way to the Columbia River. It was the route the Indians followed on their way to the plains to hunt buffalo. The children had thought that because they were up in the mountains, they would not see many farms, but they were mistaken. They were now going down the valley of the Clark Fork, where more rain falls than in the eastern part of Montana and Wyoming. Here the farmers raise fine crops of wheat, oats, barley, rye, and potatoes, the same as in the eastern part, besides apples, beans, and peas. The forest trees are larger. A passenger told the children that the trees they saw were Douglas fir, hemlock, cedar, spruce, and pine. Most of the forest is reserved by the United States government, and the lumbermen cannot waste the trees. The scenery was beautiful all along the way—sparkling streams, waterfalls, and lakes among the forest-clad hills and mountains. Not one minute did the children waste all the day long; everything looked so wonderful and so beautiful to them.

Spokane. When the train stopped at the station in Spokane, Mr. Allen and Uncle Harry were there to meet the children. They



U. S. Department of Agriculture

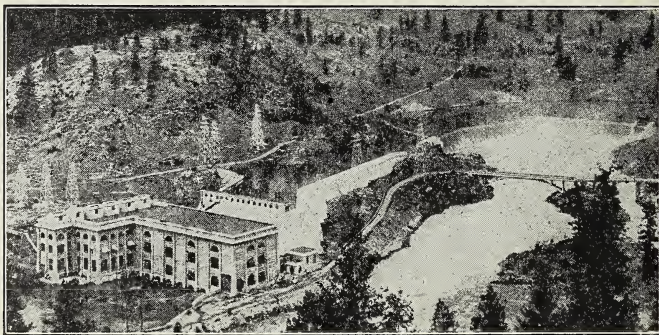
Fig. 446. A potato-club boy and his field on a valley farm in the "Inland Empire"

were surprised to see such a large and prosperous business city nestled among the mountains and so near the forests. Bob and Mary were full of questions. "Aren't you afraid of Indians and bears away out here in the woods and mountains?" At this Uncle Harry laughed heartily. "Well, you came through Indian country, and bear country too, most of the way over the mountains. Did any Indians stop the train?" he asked. "But Lewis and Clark found so many different tribes—the Blackfoots, Pierced Noses, Flatheads, and Walla Wallas," persisted Mary, "and grizzly bears chased them, too." "Yes, that is true," said Uncle Harry, "but most of the Indians live on reservations now; that is, they have a section of country all to themselves. Some of them are good farmers. This city is named for the Spokane Indian tribe. They have a reservation down the Spokane River a short distance from the city. As for bears, a few

grizzlies can still be found away back in the mountains if you really want to hunt them."

Bob and Mary were up bright and early the next morning. Uncle Harry took them for a drive about the city, and then to his office. They saw lumberyards, stockyards, grain elevators, fruit and vegetable warehouses, large wholesale houses, flour mills run by power supplied by Spokane Falls, and railroads from every direction. Spokane is the trading center for all the near-by country.

At the office Uncle Harry spread a big map of Washington, Oregon, and Idaho on the desk. "Now, children," he said, "you have learned that these three states with a slice of Montana west of the mountains were once known as the Oregon Country. It is now called the Pacific Northwest. That part of Montana which lies west of the mountains, northern Idaho, eastern Washington, and a corner of Oregon make up what we call the 'Inland Empire.' That is because the soil is so rich and produces such fine crops, and the climate is so delightful. This region east of the Cascade Range and along the Columbia River is known as the Columbia River plateau. There must have been many volcanoes here a long time ago, for nearly all the soil of the Columbia River valley is made from lava, or melted rock, and ashes that came from volcanoes. This makes the soil rich," said Uncle Harry.



By Ewing Galloway, N. Y.

Fig. 447. Electricity for light and power comes from this plant at the falls in the Spokane River.

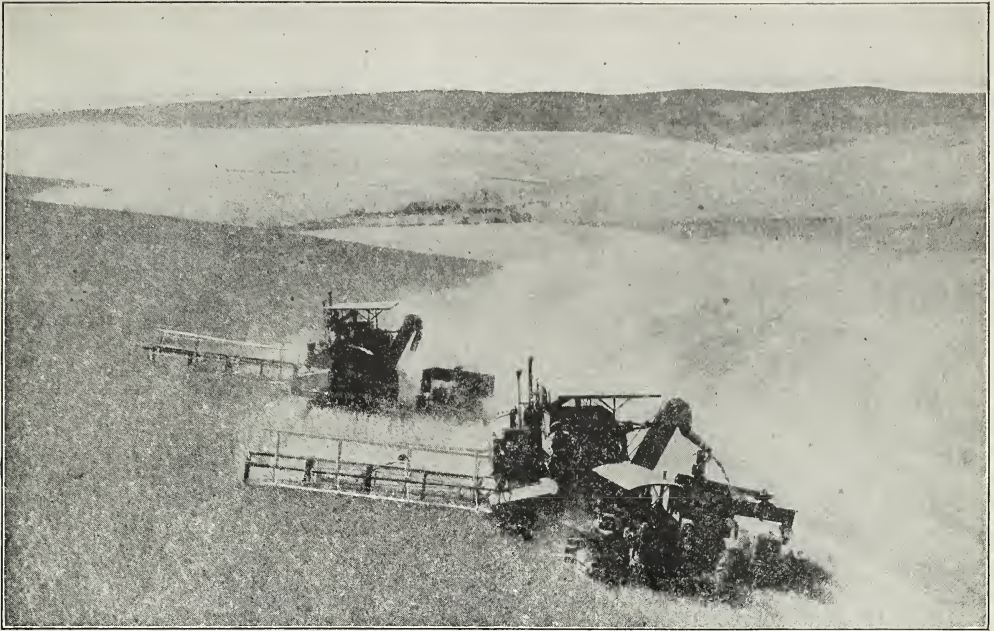


Fig. 448. Harvesting wheat in the prairie region of southeastern Washington. Find this region on the map (page 294). This picture shows the combines cutting and threshing.

By Ewing Galloway, N. Y.

"If you look at a forest map, you can see why Spokane is a lumber market and will be for many years to come. One of the largest sawmills in the world is located at Potlatch, Idaho," explained Uncle Harry. "The surrounding forests are very heavy, and the government forestry service sees that the lumbermen cut only the trees that are big enough. They also see that small trees are planted on sections from which trees have been cut. There is plenty of moisture, or rainfall, in this region. That is why the trees grow so large and so close together. There is enough timber in the Pacific Northwest to rebuild every house in the United States and have timber left. For years millions of feet of lumber have been shipped to the Atlantic Coast, Asia, and Europe from the ports of Washington and Oregon.

"One particularly rich part of the Inland Empire is the Palouse Prairie south of Spokane. It is now the greatest wheat region in the United States. Here in this section are har-

vested about thirty million bushels of wheat each year," continued Uncle Harry. "Barley, peas, alfalfa, beans, and cattle are also raised. The cool climate and good water make this a fine dairy section, also." "Why are there so few cities and towns here in central Washington and Oregon and southern Idaho?" asked Bob. "Isn't the soil good?" "Yes, the soil is good, but there is not enough rainfall for crops," answered Uncle Harry. "You know that towns do not grow except where factories are built or farmers need supplies. You see that all, or most, of the towns are along the rivers. That is because the water from the rivers can be used to irrigate the land." Study the irrigation map on page 341.

"Why is there not enough rain here and in Montana?" asked Bob, pointing to the map. "Well, you see, these mountains that are so beautiful to look at get in the way of the rain clouds," exclaimed Uncle Harry. "The winds that blow from the east do not bring much rain to this region, for the Atlantic Ocean is



Courtesy Yakima Valley Chamber of Commerce

Fig. 449. Fruit orchards in the Yakima Valley in Washington. We think of the West as a region of mountains, but there are many rich valleys, both large and small, where fine crops are raised.

too far away. Most of the winds that blow over the country north of San Francisco as far as Alaska come from the west. They are called "prevailing westerlies," because they prevail, or blow, from the west most of the time. The hot sun shining on the ocean changes some of the water into vapor or mist. This water vapor rises into the air and forms rain clouds. When the rain clouds are carried along on the winds high over the Coast Range, they are cooled and drop much of their water. The rain map (Fig. 450) shows that about eighty inches of rain falls along the Coast Range each year. The winds then pass over the Puget Sound and Willamette valleys and come to the Cascade Range. Here the clouds cool again and drop more of their moisture. By the time they get inland to Spokane and over the Rocky Mountains to Montana, there is very little moisture left in them. So the region east of the mountains gets only about ten to fifteen inches of rain in a year. Here around Spokane we get about nineteen inches. You have seen that the west slopes and tops of the mountains are covered with forest, while the east slopes have few trees. That is because there

is very little moisture left for the east side of the mountains." "I see," said Bob, "but I do not understand why they do not irrigate all the land along the rivers." "Because some of the rivers, particularly the Snake and the Salmon, flow part of the way in deep canyons," replied Uncle Harry, "and water will not run uphill, you know." "Can't it be pumped up?" asked Jim. "That would cost too much," said Uncle Harry, "but there has been built the Grand Coulee Dam, which will be one of the largest dams in the country. It will irrigate over a million acres of land in the great bend of the Columbia."

On the way to Bellingham, where Uncle Harry's lumber business was, the train ran

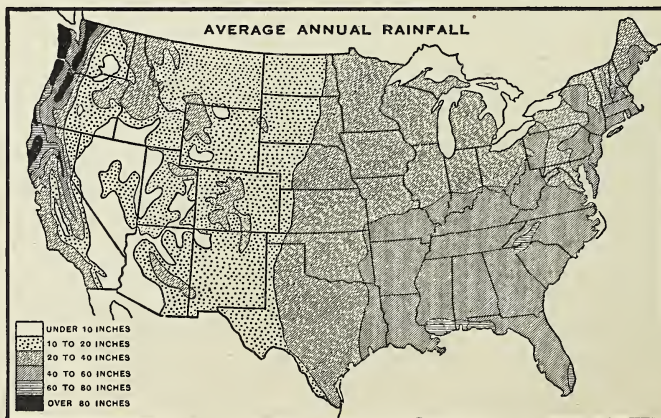


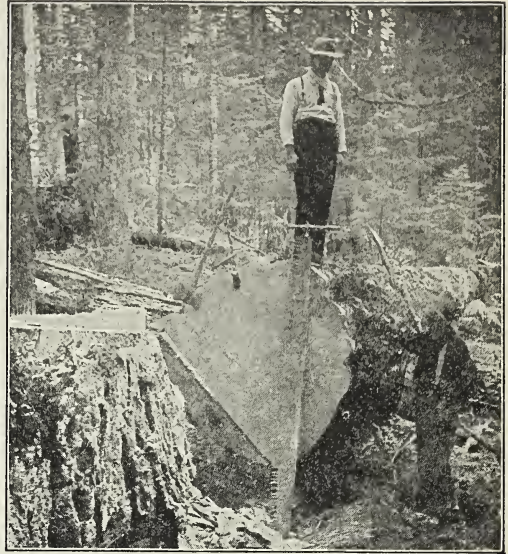
Fig. 450. Rainfall map of the United States

through the famous Wenatchee Valley. Mary said she never expected to see again so many apple trees. All of the orchards in this valley are irrigated from the Wenatchee River. Yakima Valley, to the south, is almost as great an apple section as Wenatchee Valley.

LUMBERING AND FISHING

Lumbering. At Bellingham, Bob and Mary saw great piles of lumber everywhere. Uncle Harry took them to the sawmill in the woods. The mill was built beside a mountain stream so the water could be used for power to run the machinery. Great piles of logs were stored in the dam above the mill. From the mill the children rode the logging train out into the woods. On each side of the track stood great fir, pine, and cedar trees so tall that it made Mary's neck ache to look to the top. The mill boss said that some of the trees were 250 feet tall. Many of them had no limbs for a distance of from fifty to one hundred feet from the ground. The trees are so close together that in some places the sun never shines through. Much of the ground was covered with ferns as tall as Bob.

The children saw the logs hauled to the little railroad by a skidder something like the ones used in the Southern forests. Some of the logs were so large that only one at a time could be placed on a car. Uncle Harry had an order for bridge and ship timbers, and the logs were so long that they covered five and



© Keystone View Co.

Fig. 451. Felling a great fir tree in the Northwest

six cars in a string. Bob tried to climb over one big log, but found that he had to go around it. One lumber company was using a flume to carry the logs to the mill. A flume is a chute, or box, made of planks, which runs downhill from the camp. Water from a stream is turned into the flume, and the logs float down to the mill. Sometimes the chute is made of logs, and is greased. The logs rush down the chute like an express train.

"Why," exclaimed Bob to his Uncle Harry, "this forest you have bought will last forever; there are so many trees!" "Perhaps not forever," said Uncle Harry, laughing, "but it will last hundreds of years if I 'farm' the timber, and if fire does not destroy it." "Farm the forest—" Bob thought Uncle Harry was making fun of him. "By farming the forest, I mean cutting only the right trees, taking care of the young trees, and planting to fill in any bare spots," explained Uncle Harry. "Since this is a National Forest (Fig. 453), the government will help to keep the forest in shape so that trees can be cut from it every year for hundreds of years.

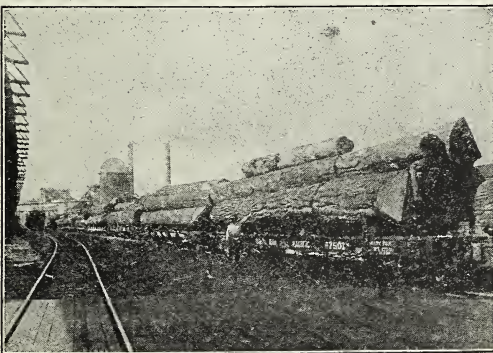


Fig. 452. Log train at the mills in Tacoma, Wash.



Fig. 453. Map of the National Forests of the United States

Courtesy U. S. Forestry Service

If we should cut all of the trees, even the smallest ones, that would be 'mining' the forest. In that wasteful way we could cut off all the trees in this tract in ten years. If we should do that, fires would probably sweep over the land and destroy the young trees. Besides, the soil on these mountain sides would wash away and leave the mountains bare. Not only that, but the water would run off so quickly that the streams would flood the country. Do you see now why the forest rangers do not let the lumbermen cut the trees any way they wish?" "Yes," said Bob, "I understand."

Bob and Mary now went to the sawmill to see how the logs were made into lumber. A chute reached from the mill to the pond. In the bottom of that chute ran an endless chain with hooks fastened to it. This chain hauled the logs up the chute into the mill where they were rolled onto the saw carriage. Here the sawyer moved some levers by his side, and steel arms reached up from under the carriage and placed each log where he wanted it. The log was then fastened down, and the carriage shot toward the saw. This saw was a thin band of steel running over pulleys just as a leather belt does. As the carriage forced the log against the saw, there was a shrill buzz, and a slab was cut off

before you could say Jack Robinson. Then the sawyer turned the lever, and the carriage shot back and started again. In almost no time the log was cut up into slabs, boards, planks, or timbers. Bob wondered how the men who worked on the saw carriage could stay on as it shot back so fast. Some mills use a gang-saw, which is made up of several saws side-by-side. These cut up a log into boards and planks as it passes through only once.

The children followed the lumber and saw it moved about on rollers as the men worked levers that would send it where it should go. They passed great piles of lumber of all sizes and lengths, and saw it loaded on the trains that would carry it away. They rode one of these lumber trains to Bellingham, and there saw a trainload of lumber piled away on an ocean steamer which would carry it to Hong Kong, China.

Salmon fishing. One evening Uncle Harry told Bob and Mary the story of the salmon. "The salmon is a queer fish," said Uncle Harry. "He is born in fresh water, grows in salt water, and dies in fresh water." "Is this a true story?" asked Mary. "It certainly is,"

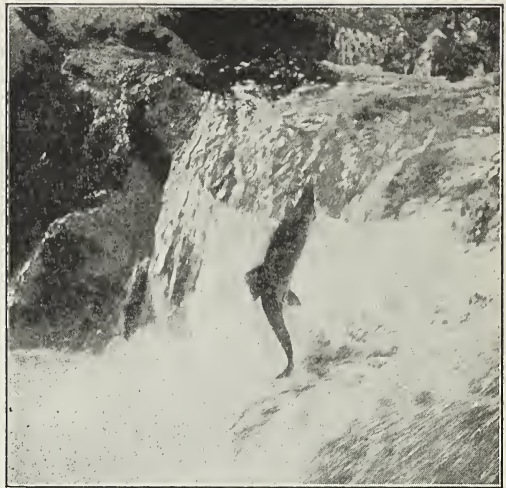


Courtesy U. S. Forestry Service

Fig. 454. Forest rangers on the look-out for fires

replied Uncle Harry. "In the spring, about March, the salmon begin to come from the sea up into all the coast streams from Alaska to California. They come into Puget Sound by the millions. They have been found hundreds of miles from the sea in little streams where the mother fish lay their eggs in the sand and gravel of the shallower waters. In their journey up the streams the salmon often come to falls or rapids. They jump over them, and then continue to swim up stream." "You said this was to be a true story," said Mary. "Well, it is a true story," replied Uncle Harry. Bob grinned suspiciously. "As soon as the eggs are laid, the parent salmon drift downstream. They are no longer fat and sleek, as they were when they left the ocean, and the old salmon all die before they reach the sea again.

"Soon after the young salmon are hatched, and while they are still very small, they begin floating downstream. Many thousands of them are eaten by other fish. By the way, they float backwards so that food just falls into their mouths from the water flowing by



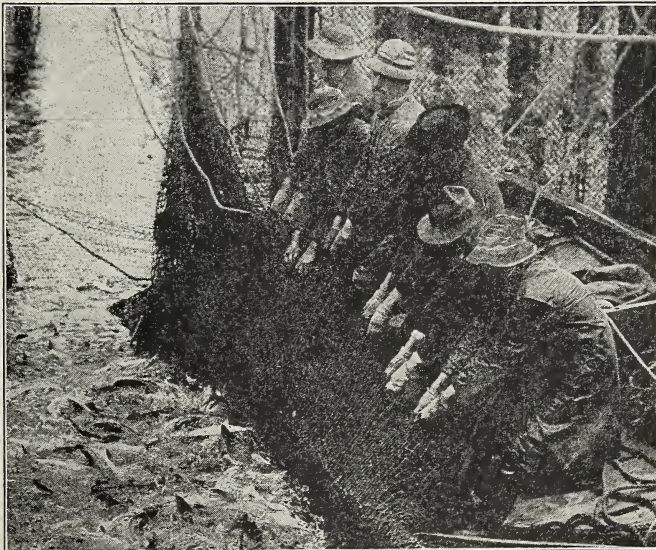
U. S. Bureau of Fisheries

Fig. 455. A salmon jumping the falls

them. They finally float out into the ocean where they stay for three or four years until they are grown. Then they start again for the fresh water to lay eggs.

"The fish are usually caught on their way upstream in fish-traps, fish-wheels, and gill nets. The traps are made so that the fish can swim into them but cannot find their way out. The fish-wheel has wire buckets fastened to a wheel set in the water. As the wheel revolves, the fish are scooped up in the buckets. Gill nets are let down into the stream, and the fish push their heads through the holes in the net. The hole is too small for them to go through, and their gills catch and make it impossible for them to back out. Salmon fishing is done mostly in the spring and summer, from March through July and August (Fig. 456).

"A part of the salmon are shipped to market in refrigerator cars, but most of them



© Underwood and Underwood

Fig. 456. Hauling in the nets in a Columbia River salmon trap

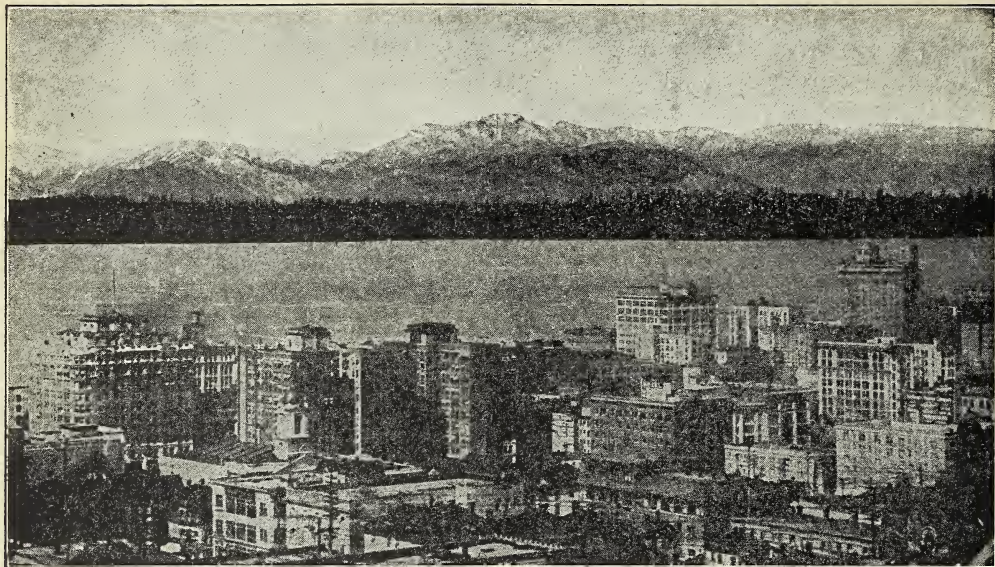


Fig. 457. When the War between the States was being fought, Seattle was just a little village of a few houses and stores along the shore of Puget Sound. Today it is a great city of over 360,000 inhabitants. Its fine harbor is the nearest we have to the ports of Asia and is the great ocean gateway of the Northwest.

are canned. We will visit the cannery tomorrow on our way home." "That is a good story, Uncle Harry," said Bob. "But the part about the salmon jumping over falls is hard to believe." Bob was still grinning, but later he saw the salmon jumping the falls.

The next day Bob and Mary visited the salmon cannery. Here they saw the fish lifted by water pressure from a fishing boat on to a belt that carried them to the "iron chink." This machine was given its queer name because it does the work that Chinamen used to do. The machine cut off the heads and tails of the fish and cleaned them. Another machine cut them into pieces for the can. Still another machine put the fish into the cans, which then went to a machine that weighed them and threw out the cans that were underweight. Next the cans were sealed, put into the cooker, and cooked. Finally, labels were put on the cans, and the cans packed in heavy cartons for shipping.

Puget Sound. Mr. Allen had business in Portland; so he decided to travel up Puget Sound by boat to Olympia and take the train

from there. The weather was cool, although the sun was shining. The Captain told them that the people around the Sound seldom see snow fall, even in the winter. They have rain and mist, instead. The state of Washington, he said, always has a moderate climate. The summers are cool and the winters mild. "How can that be when Washington is so far north?" asked Bob. "Well, you see," answered the Captain, "the mountains keep out hot winds and cold winds from other regions east of the state. And the warm Japan Current, which flows along the coast, warms the winds that blow toward Washington from the west. The winds bring much rain that makes everything nice and green. That's why those trees that you saw on the mountainsides grow so big. Here in the valley the rain is light, but we have either rain or mist nearly every day during the winter. Most people here have never seen a thunderstorm."

As they sailed up the Sound, they passed shiploads of lumber on their way out to sea. Soon after our travelers passed Everett, they came to Seattle, the largest city in



Courtesy Portland Chamber of Commerce

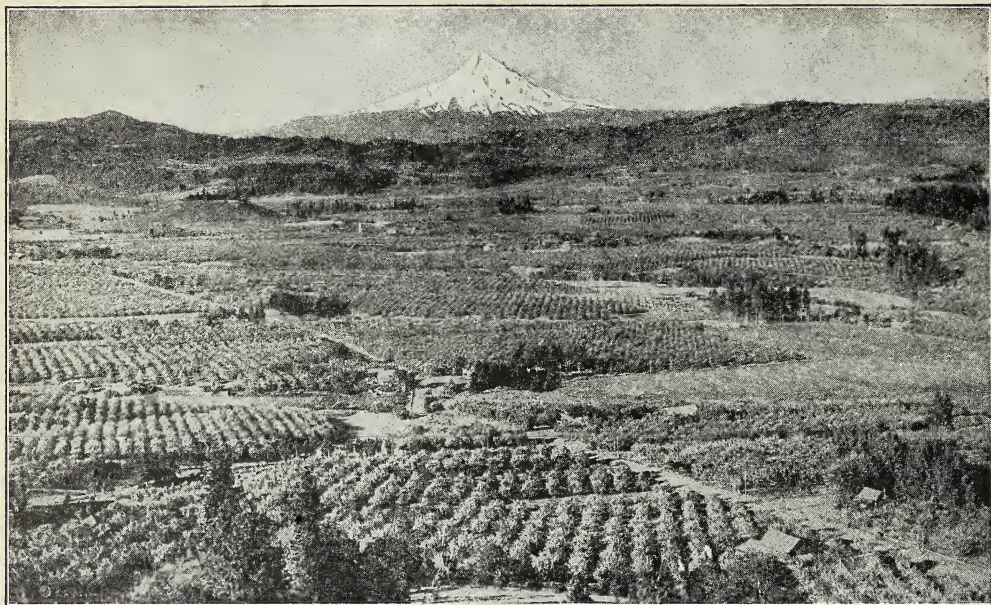
Fig. 458. A few years before the War between the States, Portland, Oregon, began as a little settlement on the banks of the Willamette near where it flows into the Columbia. Today it is a great city.

Washington and the great seaport of the Northwest. From this city they could see mountain peaks in nearly every direction they looked. In the harbor at Seattle Bob and Mary watched vessels from many distant places unloading all kinds of cargoes onto the docks. They saw these same ships being reloaded with lumber, flour, machinery, automobiles, clothing, and many other articles produced in America. The children saw that in Seattle lines of water and land transportation meet. The freight cars that had brought flour and iron to Seattle from eastern states were soon loaded with goods brought in by the ships and on their way back. The children's boat sailed on up the Sound to Tacoma, another hustling seaport; then to Olympia, the capital of the state. They were not ready to go ashore, although they had been on the boat all day.

The Willamette Valley. At Olympia the party took the train to Portland, on the Willamette River about twelve miles from where it flows into the Columbia. Here they found another busy city. Ocean steamships come up the Columbia and the Willamette to

its docks. Its people are busy handling the rich products of farm and forest. On an automobile trip up the Willamette Valley, the children passed through Salem, the capital of Oregon, and the cities of Corvallis and Eugene. The trip up the Willamette Valley made the children hungry for fruit. They saw great orchards of apples, pears, cherries, raspberries, loganberries—fruit everywhere. There were also broad fields of wheat, barley, and potatoes, and herds of beef and dairy cows were feeding on alfalfa hay. The people in this valley have plenty of foodstuffs to ship to Philadelphia and other cities. It is claimed that if all the people of the state of Massachusetts should move to the Willamette Valley, they would have plenty of room to live and raise their food. It is a wonderful valley.

Up the Columbia River. Mr. Allen told the children that he had bought a new automobile and that they would drive home. They started out over the "Old Oregon Trail," which the first settlers had followed when they came to the Willamette Valley and to Puget Sound. The Allens first trav-



U. S. Department of Agriculture

Fig. 459. Apple and pear orchards in the Hood River valley, Oregon. In the distance is Mount Hood. Where so many vegetables and so much fruit are grown, what factories would you expect to find?

eled over the famous Columbia River Highway (Fig. 426). When they reached the Hood River valley, they saw piles and piles of boxes and crates of apples, pears, and cherries. The trip up the Columbia took them past canyons and waterfalls, through the Cascade Range, and by the falls and rapids of the Dalles where the early settlers floating down the river had so much trouble. They next passed through the Walla Walla valley and along the Snake River.

Idaho potatoes. At Boise they saw boxes and crates of potatoes, each potato wrapped separately in paper. "Doesn't it seem funny to wrap potatoes in paper!" said Bob. But at the restaurant that night Mr. Allen ordered baked Idaho potatoes for supper. Bob had to admit that it was the best potato he had ever eaten. It was the only one he had ever seen so big that he could not eat it all. Bob learned that the Idaho potatoes which are raised on the irrigated land in that cool climate are now used in the best restau-

rants and railroad dining cars all over the country. All along the Snake River they saw irrigation and many fine crops on irrigated land (Figs. 460 and 461).

At Pocatello the Allen family left the Snake River and started over the mountains to the Great Plains. This took them into the state of Wyoming, which is very much like Montana with its thousands of sheep. They were now on the Lincoln Highway, traveling along the line of the Union Pacific Railway. Although this country is over a mile above sea level, it slopes gradually to the Missouri River hundreds of miles away. So they sped along the smooth highway over the same trail where, 100 years ago, the ox teams toiled for months in making the same journey.

QUESTIONS TO ANSWER

1. How are Butte and Pittsburgh alike and how different? 2. Find Great Falls in the list of cities (page 475). What connection is there between the businesses of Butte and Great Falls? What

reason was there for starting mills at Great Falls? 3. Where in the Great Lakes region is there an ore mined that is also mined at Butte? 4. Were the children traveling uphill or downhill from Butte to Spokane? On the Atlantic slope or the Pacific?

5. How do the people of the Clark Fork Valley make a living? Are there more or fewer trees here than near Billings? Why? 6. What mountains are crossed from Butte to Spokane? From the business carried on in Spokane tell in what kind of country the city is located. 7. What furnishes power for mills at Spokane? 8. From the rainfall map (page 306) tell how much rain falls south of Spokane. How much in the Great Bend of the Columbia?

9. What is the great crop in the country south of Spokane? In the Columbia plateau? 10. What two valleys in Washington are famous for fruit? What fruit? 11. What mountains are crossed between Spokane and Seattle? 12. Tell why the rains fall as they do in the Pacific Northwest. 13. Explain "farming" and "mining" lumber. 14. How are the forests of the Northwest different from those in the East and South? 15. Tell some of the strange things you have learned about salmon. On the map find the rivers up which they can go to cold water.

16. How do salmon differ from other fish about which you have studied? Tell how salmon are canned. What are the salmon-canning cities? 17. What is the climate of the Puget Sound and Willamette Valley country? Why is it so? 18. Tell why the Willamette Valley seemed so wonderful to the children. 19. For what vegetable is Idaho par-

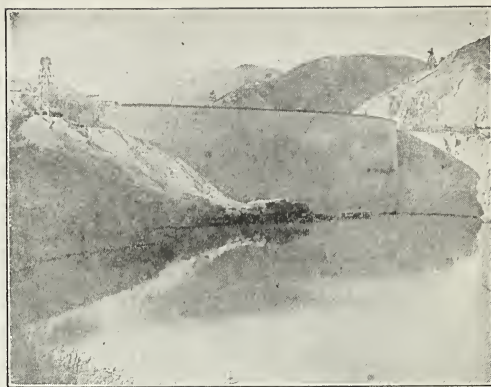


Fig. 460. The great Arrowrock irrigation dam in the Boise River, near Boise, Idaho. From the lake made by this dam water flows over the land in canals and ditches. Find this on the irrigation map, page 341.

ticularly famous? Tell of another region in the United States famous for this vegetable.

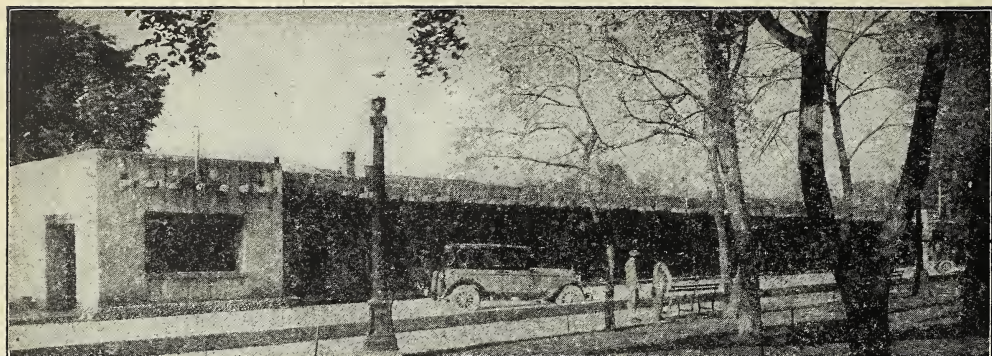
THINGS TO DO

1. On an outline map of the Pacific Northwest locate the cities, rivers, mountains, and valleys mentioned in this book. Show also Puget Sound. Draw a light line around the Inland Empire.
2. From magazines and newspapers collect advertisements of the Northwest. Paste them in a book and be ready to report on what they say of this region.
3. Turn to the table of states in the back of the book. Add the number of square miles in the areas of five South Atlantic states—Virginia, North and South Carolina, Georgia, and Florida. How do they compare in size with Washington, Oregon, and Idaho together? How many Pennsylvanias would there be in one Oregon? How many New Yorks would Montana make? Compare the size of New England with the size of the three Pacific Northwest states together—Idaho, Washington, and Oregon.
4. If anyone in your class has visited the Pacific Northwest, have him tell of interesting things he saw.

Books to read: Allen, *United States*, pp. 263-305; Carpenter, *New Geographical Reader*, pp. 382-396; *The Foods We Eat*, pp. 74-79; *The Houses We Live In*, pp. 31-55; Dorrance, *The Story of the Forest*, pp. 82-88, 173-178; Jordan and Cather, *Highlights of Geography—North America*, pp. 23-28, 299-303; Lefferts, *Our Own United States*, pp. 312-331; Pitkin and Hughes, *Seeing America—Farm and Field*, pp. 286-304.



Fig. 461. Orchards near Weiser, Idaho, on land irrigated by water from the Snake River



Courtesy Santa Fe Railroad

Fig. 462. Today in Santa Fe, New Mexico, you can see this building where for many, many years lived the Spanish governor when Spain owned the Southwest of our country.

THE SOUTHWEST AND CALIFORNIA

SPANISH GOLD-HUNTERS AND AMERICAN TRADERS

CORONADO AND THE CITIES OF GOLD

Spaniards in the Southwest. You have learned how Columbus, sailing under the flag of Spain, discovered the new land of America and claimed it for Spain. Then came the English and the French, who explored and settled parts of the new country and claimed most of the land between the Rocky Mountains and the Atlantic. The French and Indian War gave England the land from the Mississippi to the Atlantic, except Florida, which Spain still owned. This English territory became the United States of America when the colonists won their independence from England. A few years after the War for Independence our country, under President Jefferson, bought the Louisiana Territory from France, and a few years later we bought Florida from Spain. Now the United States stretched from the Atlantic to the Rockies. When England gave up her claims to the Oregon Territory, our country had spread from ocean to ocean.

But in the southwestern part of the present United States and along the Pacific Ocean lay a great region of mountains and valleys, plains and deserts, which for 300 years had been owned by Spain. Today this land makes

up the states of California, Nevada, Utah, Arizona, New Mexico, Texas, most of Colorado, and small parts of Oklahoma, Kansas, and Wyoming. Find this Spanish territory on the map (page 235). We have already learned many things about some of these states: cattle on the Great Plains of Texas and Oklahoma, and cotton in eastern Texas and Oklahoma. Now let us read the story of the Spaniards in the Southwest, how it became a part of the United States, and what it is like today.

The Spaniards, you remember, were always looking for gold. De Soto landed in Florida and wandered through the southeastern part of our country searching for the precious yellow metal. Cortez landed in Mexico, conquered the Aztec Indians, and found gold, silver, and precious jewels. Pizarro conquered the Inca Indians of Peru and found even richer treasures. This happened nearly 100 years before the little colony of Englishmen settled on the James River. In 1528 Cabeza de Vaca and de Narvaez started from Spain to search for gold in the country along the Gulf of Mexico. Their ship was wrecked on what is now Matagorda Island, Texas, but De Vaca and



From the drawing by Francis. Courtesy Univ. of California

Fig. 463. Spanish explorers in the Southwest. Coronado made his famous journey at the same time that De Soto was wandering through the Southeast.

three others saved themselves and managed to get to the mainland. For eight years De Vaca wandered around in what is now northern Mexico and southwestern United States. At times he lived with the Indians, who told him stories of wonderful cities of gold. He searched for those cities everywhere, and finally reached the Spanish settlements in Mexico. He never found the fabled cities of gold. After telling his story to the governor of Mexico, he went home to Spain.

The seven cities of gold. The Spaniards had found rich treasures in Mexico and in South America, and they kept hoping that to the north they might find more wealth. Shortly after De Vaca returned to Spain, a priest by the name of Father Marcos was sent on a trip north from Mexico City to find whether De Vaca's stories were true. He returned with a story of seven wonderful cities of gold somewhere to the north. They were called the Seven Cities of Cibola. He said he had seen them on the hills, but that the Indians would not let him go to them. This caused great excitement. The story grew and grew as it was told, until the Spaniards were talking of a city with long streets

where no one lived but goldsmiths who worked on great piles of gold. It was said that the roofs of the houses were made of gold, and the doors were studded with precious stones that had dropped from the sky.

Finally the viceroy, or governor, of Mexico decided to find these rich cities. He appointed Francisco Coronado to raise an army and to lead an expedition in search of them. Because of the

wonderful stories that had been told about the riches to be found, it was no trouble for Coronado to get men to go with him.

Coronado sets out. With flags flying and with spirits high Coronado and his men started out with Father Marcos guiding. It was the greatest army ever assembled in New Spain. There were mounted cavaliers, foot soldiers, and hundreds of Indian warriors. Herds of cattle, sheep, goats, and hogs were driven along to feed the army, and over a thousand horses and mules were needed to carry the mounted soldiers and the supplies.

Villages of sun-baked brick. From Mexico City the expedition traveled northwest toward the Gulf of California. They followed the Gulf for a way and then headed north into the region that is now Arizona. The famous Seven Cities of Cibola were supposed to be somewhere near the Rio Grande River, and here in New Mexico they came to the villages that Father Marcos had seen. But what a disappointment! All that could be found were the sun-baked mud pueblos, or villages, of the Zuñi Indians perched on the high cliffs. Poor Father Marcos! Curses and angry words were all that he received.



Fig. 464. An Indian pueblo high up on a rocky hill in New Mexico
James Sawders

He had not meant to be dishonest in what he told. He had found so many strange and wonderful things in the New World that anything seemed possible. The air in this region is clear and dry, and one can see things for great distances. The village he had seen from far away on his first journey probably did look beautiful and big with the golden rays of the setting sun falling upon it.

How disappointed Coronado was! Instead of roofs of gold and doors adorned with precious stones, he saw what looked like a heap of houses with no roofs and no doors. Instead of walls of marble, he found houses made of adobe, or mud bricks. The village was built on the side of a cliff, or bank, with a steep, narrow path leading up to it so that the Indians could easily guard against their enemies. As you can see from Figure 465, the houses in this city were built in rows, one above the other. The roofs of the first row made the front yard for the second row, and so on. When an Indian reached his house, he climbed a ladder till he came

to the roof. Then he pulled up the ladder and went through a trap-door down into the house. There he was as safe as a bird in a tree.

It was easy, of course, for Coronado to take these Indian cities of Cibola. He searched through them, but found no gold or precious stones. The natives were peaceable Zuñi Indians, living in what is now the western part of New Mexico. They still live there in their pueblos, or villages.

Coronado sees the Grand Canyon. Coronado marched west until he came to the Grand Canyon of the Colorado River. He was amazed at the scene that lay before him. "The banks of this stream are three or four miles high," he reported, "and they are in peaks higher than the tower of the cathedral of Seville." Coronado was the first white man to see the Grand Canyon, one of the great wonders of the world (Fig. 553, page 371).

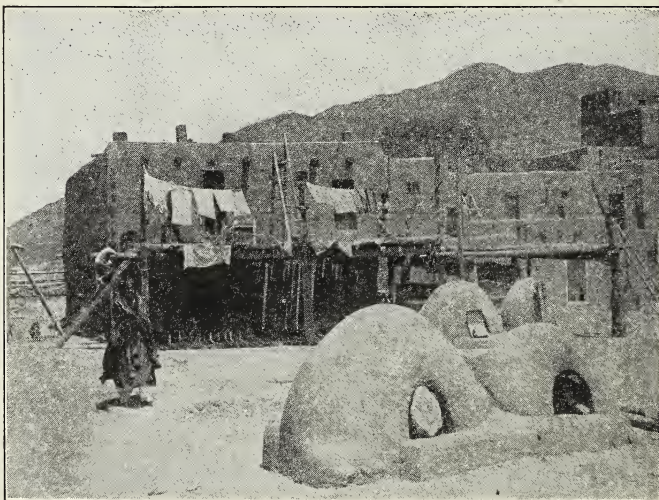


Fig. 465. Taos, New Mexico, with its pueblos probably looks today much as it did when Coronado spent the winter there. The domes in the picture are the clay ovens which the families of this pueblo use when they bake bread.
James Sawders

The search continues. These disappointed gold-seekers then turned back east, crossed Arizona and New Mexico, and then marched northeast across the Great Plains of Oklahoma and Kansas. They were searching for another fabled land called Gran Quivera. Here they found, instead of gold, herds of buffalo and wigwams of wandering Indians. In disappointment, the party returned southwest across Kansas, Oklahoma, and Texas. In New Mexico they stopped at the Indian village of Taos, where they spent the winter (Fig. 465). The next year Coronado returned to Mexico, but he brought back no gold except that on his gold-plated armor.

When Coronado passed through Cibola on his journey back to Mexico, he left several priests there to preach the Christian faith to the Indians. In trying to help these Indians the priests wandered for hundreds of miles alone in the desert and the wilderness. Some tribes received the priests kindly and gave them corn, squash, and beans to eat; others tortured them and even put some of them to death. The Spanish soldiers had treated the Indians so cruelly that they hated the very name of Spaniard. But in spite of all this cruelty, the priests learned the red men's language, lived with them, and taught them the Christian religion.

The founding of Santa Fe. The year before John Smith and the English colo-



Fig. 466. Map of Coronado's journey through the southwestern part of our country

nists settled at Jamestown, the Spaniards came again to what is now New Mexico. They founded Santa Fe, the first settlement in this region and the second oldest city in the United States. When you visit Santa Fe, you will see the palace of the Spanish governors (Fig. 462) and the ruins of the fort. The settlements in New Mexico did not grow very rapidly. Eighty years after Santa Fe was founded, there were fewer than 3000 Spanish people in the whole region, and no real settlements were made in Arizona for a long time.

But as time went on, the Spaniards explored and settled parts of this territory. Most of them lived on great ranches of thousands of acres and raised cattle. Today all through the Southwest and California we find towns, cities, and rivers with Spanish names—El Paso, Santa Fe, Albuquerque, Sacramento, San Diego, Rio Grande, San Francisco, Las Vegas, etc. In 1821 the people of Mexico finally won their independence from Spanish rule and formed the



From the drawing by Hilton. Courtesy Univ. of California

Fig. 467. A cattle round-up in the days of the Spanish ranchers in the southwestern part of our country

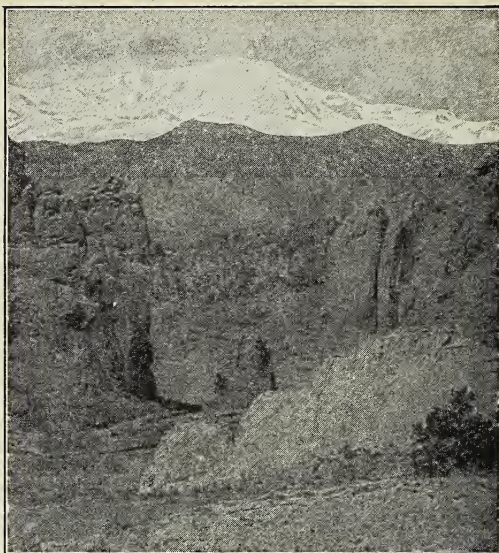
Republic of Mexico. As a result, the people in the territory were then governed by Mexico instead of by Spain.

PIKE AND THE SANTA FE TRAIL

Pike's expedition. The Lewis and Clark expedition made the people of our country even more eager to know about the great Territory President Jefferson had bought. While Lewis and Clark were on their way home from their trip to the Pacific Ocean, Lieutenant Zebulon Pike was sent out by our government to find the source of the Red River. He was to take with him some Osage Indians who had been captured by the Kansas Indians, and try to make peace between these two tribes. He was then to try to make peace with the Comanche and Pawnee Indians, who lived somewhere near the sources of the Red and the Arkansas Rivers.

Pike was told to be friendly with any Spaniards he might meet. At that time nobody knew just where the line was between the United States and Mexico. Some of the Indians might be in Spanish territory. The country was wild and not well known; so the young lieutenant was indeed given a hard task. He had to deal not only with savage Indians but with unfriendly Spaniards as well. It was only a few years before, in 1803, that Napoleon had taken Louisiana from Spain and had sold it to the United States. The Spanish people thought that Napoleon had mistreated them, and they feared the people of the United States. You will remember that they tried to keep the Americans out of New Orleans before we bought Louisiana.

The young lieutenant started from St. Louis, and soon settled the troubles between the Osage and the Kansas Indians. He then marched south until he came to the Arkansas River, and traveled up that stream as far as the Rocky Mountains. He had seen these mountains before him in the distance for many days. With three companions Pike



© Underwood and Underwood

Fig. 468. The snow-covered peak that Pike saw

climbed a high mountain, from which he saw the peak which now bears his name, Pike's Peak. At that time Pike said that no one could ever climb it. Today an automobile road and a railroad go to the very top of it. Many people travel up the mountain every year to enjoy the wonderful scenery.

Pike now journeyed to the south until he came to a stream which he believed to be the Red River. Here he built a fort in which to pass the winter. One day a troop of Spanish soldiers appeared, through whom he learned that he was not on the Red River, but on the Rio Grande, and that they were in Mexico. Trace Pike's journey on the map (Fig. 466). The Spaniards were very polite; they gave Pike and his men food and clothing, but took them as prisoners to Santa Fe. From Santa Fe Pike was sent to Mexico City, where he was kept a prisoner for several months. In the spring the Spaniards allowed him to go home, but they would not let him make any notes of his journey. You may be sure that Lieutenant Pike was welcomed when he returned to the United States. He wrote out

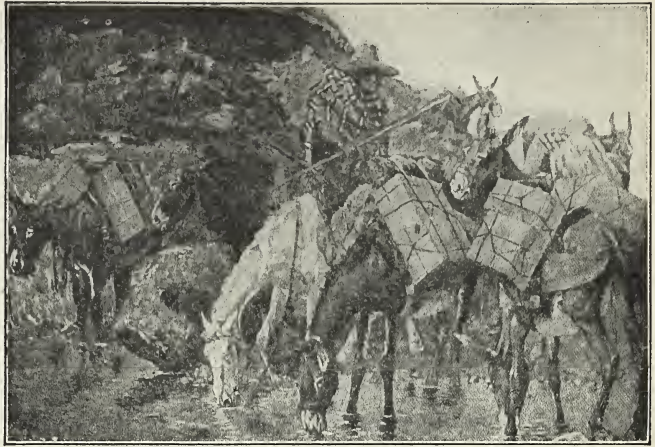
his report from memory, and the traders were greatly interested in it.

Traders on the Santa Fe Trail. The people of New Mexico did not have many of the tools, furniture, and other articles that we now think necessary. They had no factories in which to make them. They carried on a trade in sheep, wool, and skins with the Indians of the surrounding country. Other articles were brought to Santa Fe from Mexico City on pack-mules. This was expensive. Only a few rich people had such luxuries as silks, fancy boots and shoes, coffee, and sugar.

American traders were sure that they could trade with the Spaniards and make money. A few of the bolder traders tried taking goods to Santa Fe, but it was a dangerous journey. Not only were there savage Indians along the route, but the Spaniards threw all Americans into prison. Later the Spaniards made the

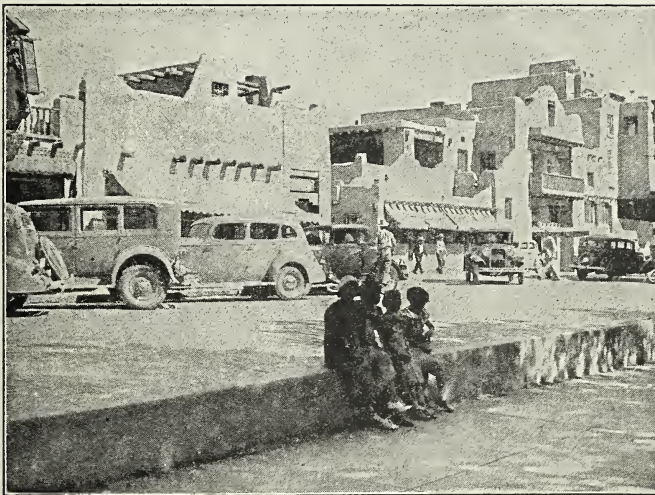
traders pay a heavy tax on the goods. At that time Santa Fe was only a small town of fewer than 5000 people. But the people in the little town were glad to get the goods the Americans brought, and paid such high prices that the traders made a good profit. So the traders kept going to Santa Fe in spite of the danger and the high taxes. When Mexico won her independence from Spain, the American traders were more welcome in the Southwest.

The trains, or caravans, of the traders started from Independence, Missouri, near Kansas City, in May of each year. At first the trains were made up of pack animals, usually from 150 to 200 mules in each train. A pack weighing about 300 pounds was strapped to the back of each mule. Mule trains had been used in Spanish countries for many years. A train of this kind traveled from twelve to fifteen miles each day. They did not stop to rest until the day's travel was over. If they did, the mules



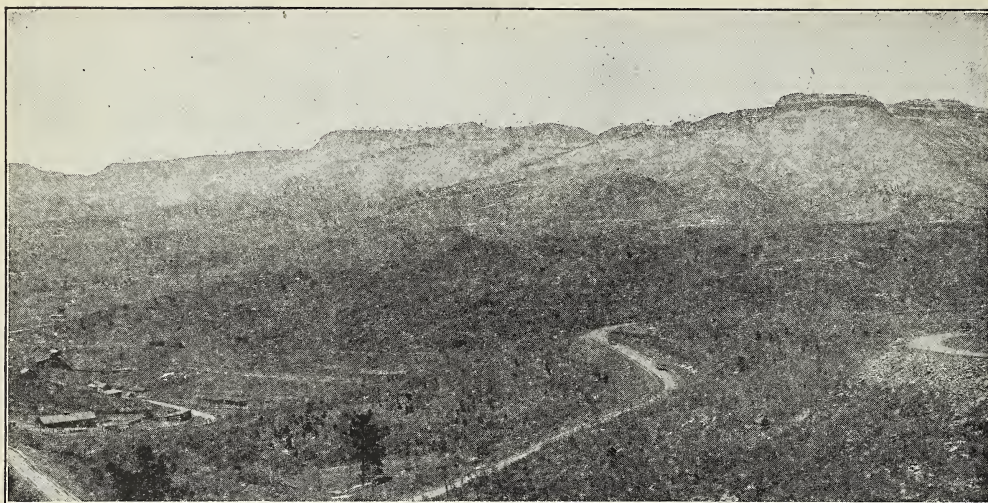
From the painting by Remington. Courtesy Univ. of California

Fig. 469. A pack-mule train of the days of the Santa Fe Trail



James Sawders

Fig. 470. Have you ever seen pictures of Spanish towns? The buildings look like these, but this scene is in Santa Fe, New Mexico.



Courtesy Trinidad Chamber of Commerce

Fig. 471. The Santa Fe Trail today at Raton Pass in the mountains south of Trinidad, Colorado

would lie down, and it was hard to get them on their feet again.

As the trading business grew, wagons came into use. Goods could be packed better in them, and more could be carried. The wagons at first were drawn by mules, but later oxen were used, usually four pairs to each wagon. Sometimes five or six pairs were needed if the roads were very bad. The wagons were heavy, and carried from two to three tons each. All kinds of goods—needles and pins, salt, hammers, cloth—were hauled in these wagons. The traders exchanged their goods for gold dust, silver, blankets, furs, buffalo skins, horses, and mules. About 150 miles out from Independence the wagons stopped until all had caught up; then they lined up four abreast and started on the long two-month's journey. The trains usually reached Santa Fe in July and were ready to start home in August. They could then get back before winter.

The trail the caravans used ran from Independence, Missouri, to Council Grove through McPherson, Kansas, and on to the great bend in the

Arkansas River. It then followed the Arkansas River through what is now Fort Dodge to La Junta, Colorado. There the trail left the river and ran south through Trinidad to Las Vegas and Santa Fe. Some of the traders left the river at Fort Dodge and headed straight across to Las Vegas, but there was so little water along that route that many died from thirst before the water holes were marked. Find this trail below and on page 274.

The traders had to watch for trouble on every trip. Sometimes wild horses stampeded their mules and oxen. Often the Apache and Pawnee Indians attacked the caravans. They



Fig. 472. Map of the Santa Fe Trail

hated the white men for coming to their hunting grounds and killing their buffalo. At night the wagons were drawn up in a circle with the mules or oxen safe inside. The Indians were so troublesome that the traders finally asked the United States to help them by making treaties with the Indians and building a fort on the Arkansas River. The government did send troops, and built Bent's Fort on the Arkansas River near where La Junta, Colorado, now stands. But the traders had many wild adventures on the Santa Fe Trail. The Oregon Trail was the route of explorers, missionaries, and settlers, but the Santa Fe Trail was made by traders. Today the Santa Fe Railway follows the old trail quite closely—out across the wheat fields and the cattle ranches of the prairies and plains. Even today in some parts of Kansas, you may see the deep ruts worn in the prairie by the wagon wheels of the caravans over one hundred years ago.

THE REPUBLIC OF TEXAS

Sam Houston. Finally the time came when American traders no longer had to worry about the Spanish, for this great southwest country and California became part of the United States. In the story of how our country won this territory we always find the name of Sam Houston. In 1793, not many years after the War for Independence, Houston was born in Virginia. While he was a boy, his father died and the family moved to Tennessee. He left school early, when his brothers got him a job as clerk in a store. He did not like that kind of work; so he ran away from home and lived with the Cherokee Indians for a while. The chief adopted him, and he dressed like an Indian and



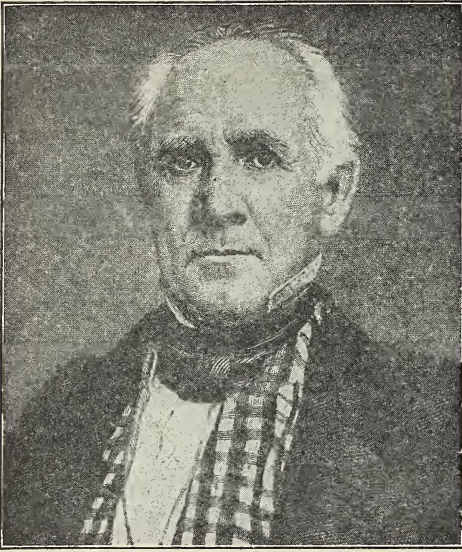
Courtesy Southern Pacific Lines

Fig. 473. Even today in parts of our country where railroads are far apart, freight is sometimes hauled by means of mule teams and wagons.

learned their ways. He was still little more than a boy when he went with Andrew Jackson to fight the Creek Indians in Alabama.

After a time Houston studied law and opened an office in Nashville. He was elected to the United States Congress, and was later chosen governor of the state. Houston had become one of the well-known men of the country. And then, all at once he resigned as governor and went to live again with the Cherokees, who had moved into Arkansas. He now helped the Cherokees to get better treatment from the government. Dressed as an Indian, with blanket, moccasins, feathers, and long hair, he went to Washington to plead for them. Someone there made fun of him. He quickly gave the man a whipping. Soon after this, Houston went to Texas, which was then a part of Mexico. He thought there would be a chance for adventure, and he was right, for he found plenty of it. Houston became the great man of the early days of Texas, and one of the most important cities of the state is named for him.

Stephen Austin. After Mexico gained her independence from Spain in 1821, she al-



© Keystone View Co.

Fig. 474. Sam Houston, leader of the Texans

lowed Americans to settle in Texas. So the Americans came—some from across the line in Louisiana, others down the Ohio and Mississippi rivers, and still others over the Santa Fe Trail. They came from everywhere, but mostly from the Southern states. On many a deserted cabin would be found a sign reading, "Gone to Texas." Very soon there were 20,000 Americans in Texas. One of the most important of these settlers was Stephen Austin, from New England. He and the settlers he brought with him were given a big tract of land between the San Jacinto and the Lavaca rivers. Austin was to have nearly 70,000 acres of land for himself. That was a large farm for one man to own. The city of Austin, the capital of Texas, is built on the land given to Austin, and is named for him.

The Texans rebel against Mexico. When the Mexicans saw that so many Americans were coming into Texas, they began to be worried. They were afraid the Americans would take the country away from them. They passed laws to keep any more Ameri-

cans from coming and other laws that made life hard for those who were already there. The Americans objected to these laws and sent men to Mexico City to try to have them changed. Not only did the Mexicans refuse to change these laws, but they mistreated the Americans in every way. There was trouble all the time between them and the Mexicans, until finally Texas declared her independence from Mexico. Sam Houston was made commander of the armies, and the Mexicans were driven out of the country. But the Texans could not agree very well among themselves. When Santa Anna, the Mexican General, came back with a large army, the Texans were not ready to fight him. Santa Anna easily captured the town of San Antonio. One hundred eighty-three Texans, who had been defending the town, fortified themselves in an old church, or mission, called the Alamo (Fig. 476). There nearly 3000 Mexicans attacked them, and when the fighting was over, every Texan had been killed.

The killing of the men in the Alamo so aroused the people of Texas that an immediate attack on the Mexicans was planned. On the banks of the San Jacinto River, Houston and his men met Santa Anna. The Americans went into battle shouting "Remember the Alamo! Remember the Alamo!" They defeated the Mexicans and captured Santa Anna, who was not allowed to go home until he had signed the treaty which freed Texas. Now Texas became a republic, and Sam Houston was the first president. The flag of the new republic had on it one large

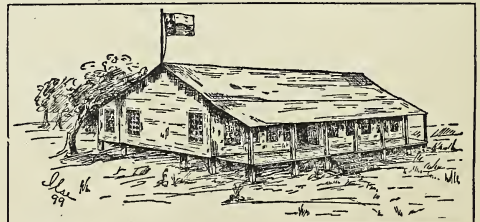


Fig. 475. This little wooden building was the first capitol of the Republic of Texas



James Sawders

Fig. 476. The Alamo. This historic building has been carefully preserved and looks much as it did in early days, long before the city of San Antonio grew up around it.

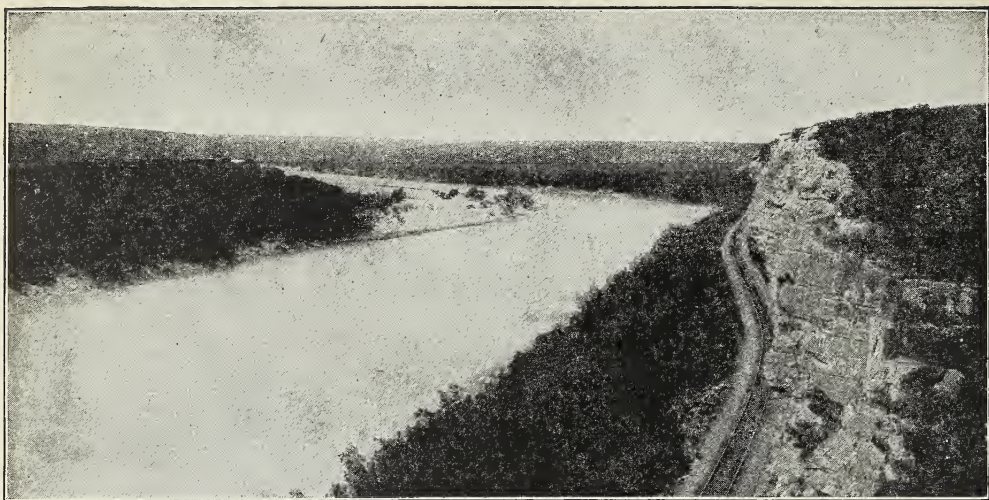
star; so that is why Texas is today called the Lone Star State.

Davy Crockett. In that fight at the Alamo was the famous Davy Crockett from Tennessee. He had been with Andrew Jackson and Sam Houston in the war against the Creek Indians in Alabama. Crockett was a jolly fellow who could play the violin, tell a good story, and shoot with deadly aim. People liked him so well that they elected him to the Tennessee state legislature and later to Congress. He amused the people of Washington with his leather hunting shirt, moccasins, and coonskin cap, and with his rough western ways. Then the time came when Crockett was not re-elected to Congress. He had heard about the troubles in Texas, and decided to go there and help the Texans gain their independence. "Come on, Betsy," he said to his old rifle, "I am going to Texas to help the Americans fight." He arrived just a short time before the battle at the Alamo. It is said that during the fight Crockett tried to cheer the men by playing his fiddle.

Texas becomes a part of the United States. Most of the people of Texas wanted Texas to become part of the United States,

and in 1845 she joined the Union. Shortly after this a quarrel arose between Mexico and the United States over the boundary line. Mexico claimed that the Nueces River marked the line, and the United States said the Rio Grande River was the boundary. Then too, the Americans were becoming very eager to own all of this country to the Southwest. They were really glad of a chance to pick a quarrel with Mexico. So war was declared between the two countries. General Zachary Taylor was sent across the Rio Grande where he defeated Santa Anna. General Winfield Scott went to Vera Cruz, marched to the city of Mexico, and captured it. General Stephen Kearney took the town of Santa Fe and then started on the long march across to California.

On this march the soldiers followed the old Gila River Trail, which the Spanish had used for a long time. This trail led south from Santa Fe along the Rio Grande, and then westward along the Gila River to California. Find this trail on the map (page 274). The soldiers suffered great hardship on this march, for they were traveling through what is just about the hottest and driest part



Courtesy Southern Pacific Lines

Fig. 477. Along the Rio Grande in Texas on the border line between our country and Mexico. The railroad is in the United States. Across the river is Mexico.

of our country. In California General Kearney found Colonel Fremont already there with a small army, and also some American warships that had come around South America and up the Pacific; so California was soon taken. Mexico was defeated everywhere. She gave up Arizona, Utah, Nevada, California, and part of Wyoming, Colorado, and New Mexico, for which the United States paid her \$15,000,000. Study the map on page 235 and find this great territory that became part of our country. You have now seen how our country grew from a small nation between the Mississippi River and the Atlantic Ocean to a great nation stretching from the Atlantic to the Pacific and from Mexico to Canada.

Indian Territory. Oklahoma is one of the youngest of our states, and has been called the little sister of Texas. You see, Oklahoma is much like Texas, with cotton and oil in the east, wheat and mixed farming farther west, and cattle raising in the western part. Before Oklahoma became a state, it was called the Indian Territory. The people in the states east of the Mississippi River wanted to move the Indians so that they could

have the land. You remember that the Cherokees kept the white people out of western Georgia and Alabama for a long time. There were other tribes in parts of the country, too. The Creeks, Seminoles, Chickasaws, and Choctaws were also in the southeastern part of the United States. When President Jefferson bought the Louisiana Territory, one of his reasons was that the Indians could be moved to this land west of the Mississippi so that the white men could have all the land east of the river.

One hundred years ago some of the people thought that the land west of Missouri and Arkansas was a desert where white men could not live. So, when some of the Indians east of the Mississippi wanted to move west, the government gave them the land that is now Oklahoma as a place which they could have to themselves. The Indians were told that the white men would not bother them there. This land was then named "Indian Territory," and several tribes of Indians moved their homes there. But as white people settled all around Indian Territory, they found the land very fertile. As a large part of the land in the Territory was not occupied by

the Indians, the white men kept asking Congress to let them have it. Finally in 1889 the Government bought the central part of the Territory, so that white men could go in that part and settle.

The rush for land. There were so many people who wanted land in the Indian Territory that on the day it was opened the settlers were made to get in line about as you do to start a race. It is said that 20,000 people were lined up along the border on the morning of the first day that people were allowed to go into the Territory. At noon bugles were blown, and each person started in a mad rush to choose the place he wanted. Some were in buggies or wagons, some on horseback, some with wheelbarrows, and still others with their goods on their backs. Everyone raced as hard as he could to stake out his land. Towns and cities were laid out before night of that first day. Of course some of the people did not get good land, or even good locations in the towns, but there was plenty of room for all.

Indian Territory was the last big section of our country to be settled. And this happened not so many years ago. Your grandfather may be able to remember the rush for land in Oklahoma.

QUESTIONS TO ANSWER

1. What people first settled our Southwest? 2. Over what state did Cabeza de Vaca wander? What wonderful story did he tell that caused the Spaniards to explore the Southwest? 3. Name the two Spaniards who had found gold in America and the countries where they found it. 4. Where were the supposed Seven Cities of Cibola? 5. What city in the Southwest was founded about the time Jamestown was settled? Near what river is this city? 6. Why did the Yankee trader want to get to Santa Fe? Why were the Spanish officers not friendly with the Americans? 7. Who was the first American officer to go over what was later the Santa Fé Trail? What mountains did he reach? What other Americans had found the same mountains



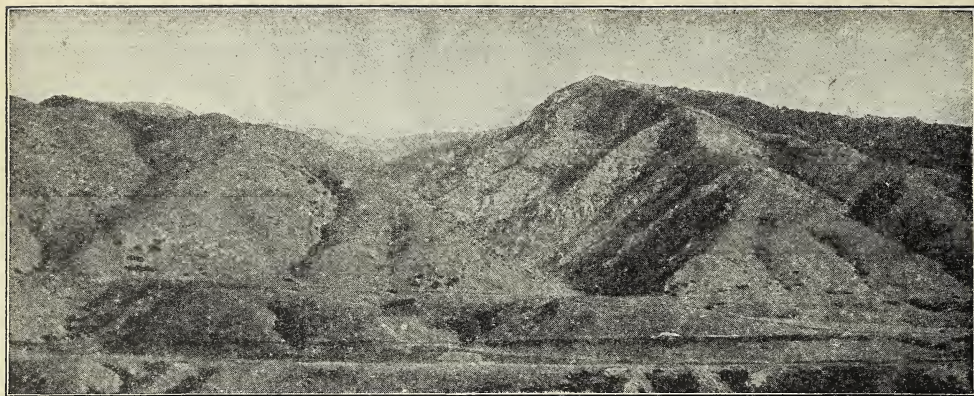
Fig. 478. Signing a treaty with the Indians. The old chief cannot write; so he is making his thumb mark on the paper.

farther north just before this? What railroad now follows the old trail?

8. What goods were taken to Santa Fe and how? For what articles were they traded? 9. Tell what you can of the story of Sam Houston. What did Stephen Austin do? 10. What was the Alamo? Who was a hero of the fight at the Alamo? 11. Why is Texas called the Lone Star State? 12. Why did we go to war with Mexico? Be ready to show on the map the land that was added to our country because of this war. 13. Be ready to show the route that General Kearney followed on his march from Santa Fe to San Diego. Through what kind of country did he pass?

THINGS TO DO

1. On the wall map of the United States trace the journey taken by Coronado. 2. Make a picture of one of the seven cities of Cibola. 3. Trace the old Santa Fe Trail and then place it on an outline map. Do the same for the Santa Fe railroad. 4. See if you can draw a picture of a pack mule or a pack train crossing the plains. 5. Look at the map and see how you can tell from the names that the Spaniards explored the Southwest. Make a long list of the Spanish names of rivers, cities, and mountains. Galveston should be Galvezton, since Galveston Bay was probably named for a Spaniard, Galvez. 6. Make another list of names of heroes of Texas and of the United States. There may be a few Indian names, too, on the list.



U. S. Department of Agriculture

Fig. 479. Dry hills and dry plains covered with sagebrush (Fig. 482) made early travelers across the West call the Great Basin region a desert.

THE GREAT BASIN

FREMONT THE PATHFINDER

What the Great Basin is like. Some of the first school geographies about the year 1840 labeled all the country from Kansas to California "The Great American Desert." People from Europe who visited this country and wrote letters and books about their travels said that the western part of what is now the United States was a desert. Some of the people who traveled over the Oregon Trail wrote to their friends that they had passed through a desert all the way from the Platte River to the Columbia River. To-day we laugh at the idea of calling any part of the Great Plains, the Rocky Mountains, and the Great Basin a desert. Only a corner of Arizona and parts of Utah and California are called desert today.

None of the region between the Rocky Mountains and the Sierra Nevada and Cascade Mountains gets much rain. Just now, we want to learn about that part which is called the Great Basin: Nevada, the western part of Utah, southern Oregon, and the eastern edge of California. Let us see why it is called a basin. We know what a kitchen basin is. Well, the Great Basin is something like that. It is a great region just about sur-

rounded by mountains. Locate the Great Basin on the map (page 294). Notice where the lowest land in this region is located. Find it also on the map on page 274. Locate Great Salt Lake and other lakes. Do they have outlets that carry their water to the ocean? You will see that the water stays in the Great Basin just as it does in the kitchen basin. Do you know why many of the lakes are salt?

Fremont the Pathfinder. Traders and trappers were of course the first white men to go into this country west of the Rocky Mountains. But they did not make any maps to guide other people who might want to go. Just as President Jefferson wanted to find what the great Louisiana Territory was like, so the people about thirty-five years later wanted to know more about the country between the Great Plains and the Pacific Ocean. Lewis and Clark had explored the Oregon territory, and fur traders, trappers, settlers, and missionaries to the Indians had gone into this new country. People were becoming more and more interested in the land west of the Rockies. They wanted to know what the country south of the Oregon territory was like, and how to get overland to California. There was need of someone to explore this

country and make maps of the best trails. Therefore the United States government sent out Colonel John C. Fremont to mark these paths. He was given the name "Pathfinder" because he wrote so well about what he saw and made such good maps of the country.

In 1842 the government sent Fremont to follow the Oregon Trail from the Missouri River to the South Pass of the Rocky Mountains. He was told not only to make maps, but to write about the grass, the game, the water, and to see whether a better way over the mountains could be found. He was to make a report so that travelers could follow the best trails.

Kit Carson, the great plainsman. When Fremont was on the boat going from St. Louis up the Missouri to the mouth of the Kansas River, he was telling the passengers what he expected to do and that he needed a guide. A voice as soft and gentle as a woman's spoke up: "I have been in the mountains for some time. I think I can guide you to any place you may wish to reach." Fremont was surprised to see that the offer came from a short, slender man dressed in rough hunting clothes. He was more surprised to learn that this man was the famous guide and scout, Kit Carson, and hired him at once.

Christopher (Kit) Carson was a Kentucky boy. The family had moved to Missouri when Kit was only a year old. When Kit was thirteen years old, his father put him to work with a harness maker. Kit could not stand it to be shut indoors all day; he wanted to be out in the open. When he was seventeen, he joined a party of settlers who were going by ox-team to Santa Fe. The following winter Kit lived with Kin Cade, an old hunter and trapper who taught Kit a great deal about hunting, trapping, and fighting Indians. He also taught him Spanish. Among other things, the old man told Kit always to keep his gun by his side, and when he was out on the plains alone always to sleep outside the light of the fire because he would have a bet-



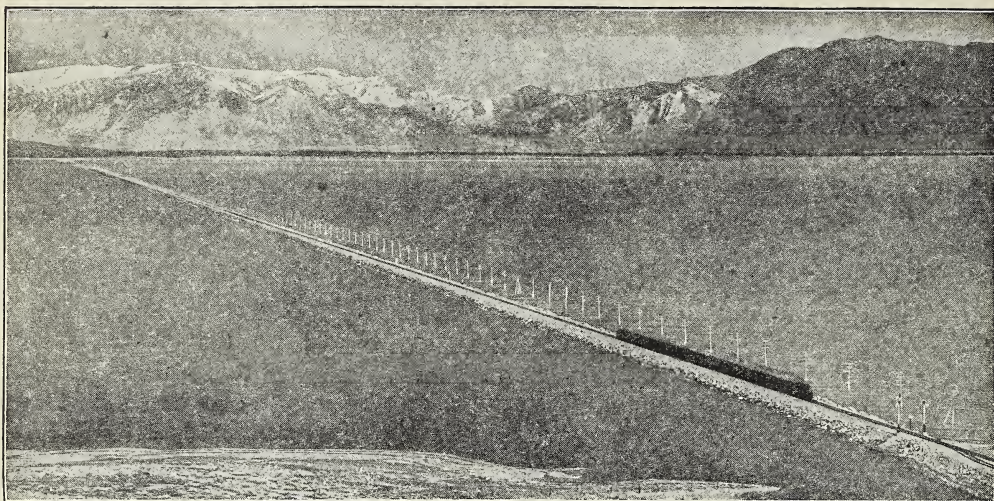
Courtesy Trinidad Chamber of Commerce

Fig. 480. Statue of Kit Carson at Trinidad, Colorado

ter chance to get away if Indians came upon him. Kit became a good trapper, and during the next few years he trapped and hunted over the country from Santa Fe to San Francisco and from the Rio Grande to the Columbia River. Find this region (page 274).

Kit never started a quarrel, but the rough trappers feared the little soft-voiced hunter, for he was an excellent shot. The story is told that one time a group of Indians, trappers, and traders had gathered at a trading-post. One of the men, a Frenchman and a great bully, was boasting of his strength and said, "I can flog all the Frenchmen present; and as for the Americans, I could cut a stick and switch them." "I am an American, and a small one," Kit replied. "We do not want to quarrel, but you cannot talk that way. If you do not stop, I will shoot you." The bully went after his gun, but when he came back, Kit was quicker with his own gun and shot the bully through the wrist. The man made no more threats when Kit was around.

Kit made money trapping, but beaver were



Courtesy Southern Pacific Lines

Fig. 481. Great Salt Lake, Utah. Out of the desert a few miles from the lake has grown Salt Lake City, the most important city between Denver and the Pacific coast.

getting scarce; so he took the job of hunting game for the soldiers at Bent's Fort, on the Arkansas River, where La Junta, Colorado, now stands. It was easy for Kit to shoot all the buffalo and game the soldiers needed. About this time he became homesick for his old home in Missouri; so he made a visit to St. Louis. He was on his way back West when Fremont met him on the boat.

Fremont's first trip. Fremont and his party set out over the old Oregon Trail up the Missouri. They left the Missouri River near where St. Joseph, Missouri, now stands, and traveled northwest to the Platte River. They reached that river at Fort Kearney, where now stands the city of Kearney, Nebraska. The vast plains covered with grass were treeless except along the streams. What would Fremont see growing on these plains today? The party followed the Platte and the North Platte rivers into what is now the state of Wyoming.

When they came to the mouth of the Sweetwater River, Fremont followed that stream into the mountains. Today this is the great sheep country of Wyoming. The party was now in country that was high

above the plains over which they had traveled, but the only way they could tell that they were in the mountains was that the country was rougher. The party had been going uphill all the way from St. Joseph, but the rise was so gradual that it was hardly noticed.

Fremont and his party now came to the Wind River Range and South Pass, where the Oregon Trail crossed the mountains. Here they turned north and climbed the highest of the peaks. This is now called Fremont's Peak. Find it on the map (page 294). Fremont returned to the East and made his report. The government was very much pleased with his careful work.

Fremont's second trip—Great Salt Lake. The next year Fremont was sent to explore and map the country beyond the South Pass of the Rockies. With Carson as his guide, he started out northwest across Kansas, and up into Wyoming to the Sweetwater River and South Pass. Through the Pass they went, and on to the Bear River. When he came to Bear River, he followed it to its outlet in Great Salt Lake. Find the Bear River on the map (page 294). You can find it, near the city of Brigham, Utah, running into Great

Salt Lake. Kit Carson had told Fremont of this salt lake, yet Fremont was surprised to see along the shores rocks covered with salt, and salt so thick that it could be scooped up by the ton. The country around is bare, because little rain falls there. The water is salt because the lake has no outlet to the sea. There are little particles of salt almost everywhere in the ground: Rivers and rains wash them into lakes. If the lake has an outlet, the salt is carried away to the ocean. Since Great Salt

Lake has no outlet, the salt of course has to stay in the lake. It is so salty that no fish can live in it, and if you go bathing, you will float like a cork.

In the Willamette Valley. All the way along, Fremont made maps and wrote reports on what he saw. They had traveled all summer over hundreds of miles of country that was covered with nothing but sagebrush, and where water was scarce (Fig. 482). One thing Fremont did was to mark and report the places where travelers could find water. The party then traveled north again until they came to the Oregon Trail where it crosses the Snake River, near the present city of Pocatello. Then they followed the old trail to Fort Vancouver and the Willamette River. Along the Willamette River the country was beautiful, and the weather was fine. The men enjoyed the green forests, and the horses rolled in the soft green grass.

Now turn to the map on page 274, and find the line marked "Fremont Trail." It begins near the mouth of the Columbia River and runs south. Follow it all the way back to St. Louis, so that you will understand better what you are to read next.

Southeast into Nevada. But their task was not finished. Instead of returning as they



U. S. Department of Agriculture

Fig. 482. Travelers over the Oregon Trail saw hundreds of miles of plains covered with sagebrush in Wyoming, Idaho, and eastern Oregon. Now look at Figure 488, page 332.

had come, Fremont decided to go south into California and what is now western Nevada. At that time this territory south of Oregon belonged to Mexico. In November the explorers started up the Willamette River. Then they crossed over to the Deschutes River, and worked through the mountains to Klamath Lake, and to Goose Lake, the head of the Sacramento River. From here they went on southeast to Pyramid Lake and to the place where Carson City, Nevada, is now located. They were now on the western edge of the Great Basin. The horses got plenty of green grass in the valley of the Carson River, and the men were able to buy fish from the Indians. Both horses and men were in need of rest after the hard traveling they had done. Now the party was ready to turn to the west again and head for California and the Sacramento River.

Over the mountains to California. Fremont knew that they were not many miles from the Sacramento Valley. He knew, too, that if they should travel west, they would be nearer to food, for there were settlements in the Sacramento Valley. To the east lay only the dry, desolate Great Basin. The Indians told the white men that they could not go through the high Sierra Nevadas to the west



Courtesy Southern Pacific Lines

Fig. 483. Up into the Sierra Nevadas to beautiful Lake Tahoe went the explorers. This picture shows Mount Tallach with its cross of white snow.

between the Great Basin and the valley. They held their hands high over their heads to show how deep the snow was. But Fremont thought they could travel that short distance over the mountains.

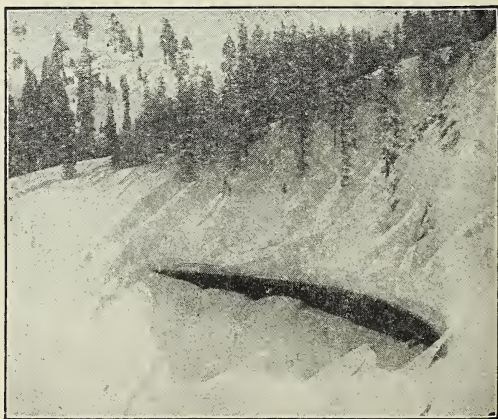
This was one part of the country that Kit Carson did not know, and none of the Indians would guide the party. Fremont started across anyway. It was late February, and the snow was ten, twenty, and even thirty feet deep on the mountains. They broke a path by having the strongest horses and men go single file through the snow. The food gave out, and they had to kill some of the horses for food; they even killed and ate their hunting dogs. Snow, snow everywhere; it looked as though they would actually be snowed under and die there. Today a railroad follows this path, and long sheds have been built over the road to keep off the snow (Fig. 484).

One day Fremont and Carson climbed up a mountain as far as they could go, and from there Carson saw country that he knew. They went back to camp, and leaving the weaker men behind they struggled on through the snow until they came to Colonel Sutter's Fort, an American fort, where the city of

Sacramento now stands. The men were nearly dead when they got there. Colonel Sutter sent a party back to get the rest of Fremont's men—those who had been too weak to travel farther.

South through California. You may be sure that the starving men were glad to eat some of Colonel Sutter's fine beefsteak, but they stayed only two weeks with him. They traded with him for fresh horses, and about the first of April they traveled south down the Sacramento River, up the San Joaquin River, and across to

where Bakersfield now stands. They enjoyed that trip. It was spring in California; flowers were in blossom, and the weather was fine. Now they must start back east again, and first of all they had to cross the Sierra Nevadas through which they had struggled on their way to Sutter's Fort. But the mountains were lower here, and there was an easy pass. However, they faced new hardships in the burning desert ahead.



Courtesy Southern Pacific Lines

Fig. 484. The black streak is a snowshed over the railroad through the Sierra Nevada Mountains.

East through the desert.

From the valley they traveled through Walker's Pass. Here their Spanish guide pointed to the east and said, "There is found neither water nor grass—nothing. Every animal that goes there dies." That was not quite true, but it was almost that bad for it was a hot, baking desert country; there was some water where small streams flowed down from the mountains.

As they traveled on, the weather became hotter, and water was still scarce. They would have been glad to have some of the snow they had found in the Sierra Nevada Mountains the winter before. In some of the valleys through which the men traveled, they found thin grass and mesquite bushes. They passed over old lake beds where the water was all dried up. One lake bed was covered with salt, another with borax, and still another with soda. They passed near Death Valley, which is so hot and dry that people could hardly live while crossing it. A few years later, a party going to California tried



Painting by M. Valencia. Courtesy Sacramento Chamber of Commerce
 Fig. 485. Sutter's Fort in the days of Fremont. Now look at Figure 542.

to cross Death Valley and all died. This gave the valley its name. Find Death Valley and two deserts on the map (page 294).

Back at Great Salt Lake again. The party had soon crossed the corner of Nevada, and followed up the Virgin River into Utah. They kept on to the north until finally they came to the Great Salt Lake. Locate Fremont's route on the map and you will see that nearly all the cities and towns in Utah are along that old trail. That is because the streams that come down from the Wasatch Mountains furnish water for irrigation. Can you tell why it is necessary to irrigate in Nevada and Utah?

From Great Salt Lake Fremont went through the mountains into what is now Colorado, passing near the present site of Leadville. He and his men had at last traveled all around the Great Basin. They had gone around the northern part on their way west, the western edge when they were at Pyramid Lake, and the southern and eastern edges on their way back home from California. Fremont had traveled 6500 miles in fourteen months.



U. S. Geological Survey

Fig. 486. The desolate Death Valley in Southern California



Visual Education Service

Fig. 487. Celebrating pioneer days at Salt Lake. Hundreds of Mormons walked the long weary miles westward, pulling two-wheeled carts like these. Others made the journey in covered wagons.

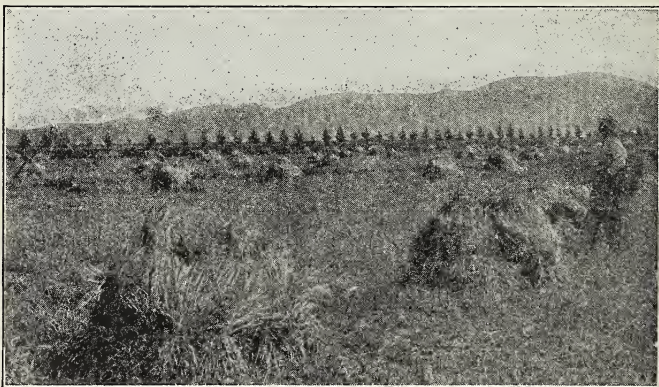
SETTLING THE GREAT BASIN

Mormons move into the desert. The first settlers in the Great Basin were the Mormons. They moved there to get away from people who persecuted them because of their religion. They had lived first in New York, then in Ohio, and then in Missouri and Illinois. Finally they decided to move out of the United States, and started west over the Oregon Trail. Brigham Young, their leader, with a few others, went ahead and chose the land around Great Salt Lake as a place to settle. That region was then a part of Mexico, and was so nearly a desert that Young thought no one would ever come there to bother them. The ground was hot, dry, and sandy, and sagebrush grew everywhere. The country looked the same for miles and miles around, except off to the east, where green trees covered the slopes of the Wasatch Mountains and snow covered the tops. The first night it rained. Since rains seldom come in Utah in July, the Mormons thought this was a good sign.

Irrigating the desert. No sooner had the main party arrived, than they went to work plowing, planting, and building homes. One of the men began to plant potatoes before he had eaten his dinner. The timber was such a distance away that they built many houses of adobe or brick. They planned their town and then built irrigation ditches to bring water for their crops from the streams of the Wasatch Mountains. That first year the Mormons had a hard time, and some died because they

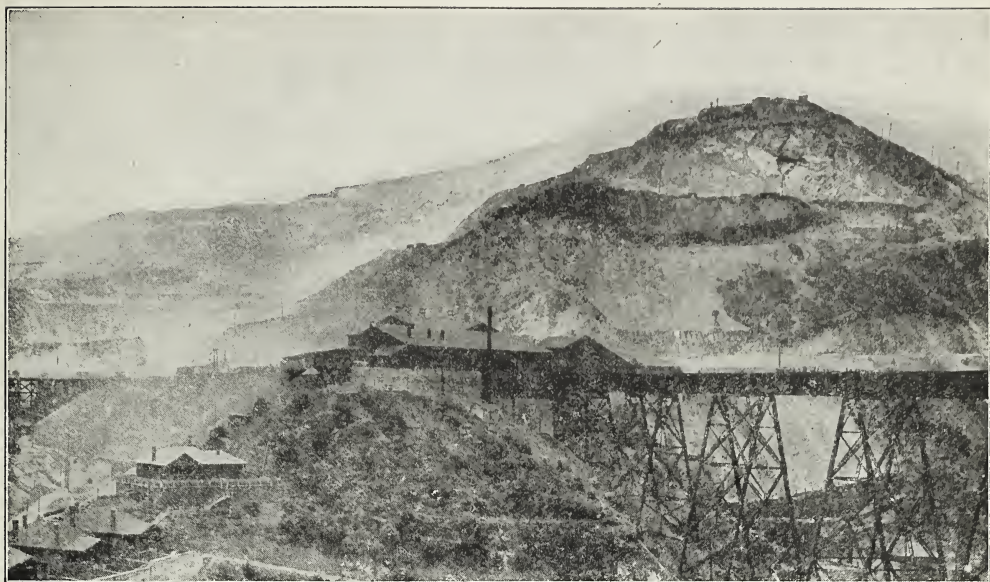
did not have enough food. Grasshoppers and crickets ate their crops, and they were just about ready to give up when a flock of gulls from the islands in the lake came and ate the hoppers and crickets. The Mormons irrigated large tracts of land, and soon became prosperous.

On the irrigation map (page 341) locate the irrigated land in Utah; also the towns and cities. Are they all in the same part of the state? These irrigated lands raise many kinds of crops: alfalfa, sugar beets, vegetables, fruits, and feed for poultry. Other



U. S. Bureau of Reclamation

Fig. 488. This was once a dry sagebrush plain like that in Figure 482. Irrigation made it fine farm land.



By Ewing Galloway, N. Y.

Fig. 489. A mountain of copper ore at Bingham, Utah. Where else is an ore mined with steam shovels?

parts of the state furnish pasture for sheep. Since the Mormons made their settlement, rich minerals have been discovered in Utah. At Bingham, just south of Great Salt Lake, is a mountain of copper ore that is taken up with steam shovels. Lead, silver, gold, and zinc mines have an output worth millions of dollars each year. There also are rich coal and iron ores that are only waiting for the time when they shall be needed.

The gold-rush to California. In 1848 gold was discovered in California. People were wild to dig for gold, but it was late in 1849 before they got started. Because of this they were called "Forty-Niners." Many went by ship around Cape Horn, the southern tip of South America, but most of them rode or walked across the country over the California Trail (see page 274). This trail followed the Oregon Trail to South Pass, then to Salt Lake. From there it went across to the head of the Humboldt River, followed that river to its mouth, and on to Carson City, Nevada. It then led over the Sierra Nevada Mountains by a route that Fremont had laid out on another exploring trip that he had later taken.

The gold-digging craze spread fast, and so many people wanted to go to California that a stage route was laid out. You may have seen moving pictures of the old stagecoaches used in that day. It took twenty-five days, traveling day and night, to go from Kansas City to San Francisco, and the passengers



Courtesy L. S. Gillham Company

Fig. 490. The beautiful temple of the Mormons at Salt Lake City, Utah



Drawing by Crocker. Courtesy University of California

Fig. 491. In May of 1849 nearly 20,000 people started for California.

had to sleep while riding. The horses were changed every few miles, and the coach stopped three times a day so that the passengers could eat. Mark Twain and his brother once made the trip to western Nevada by stagecoach, and Mark said that he could not find words enough in the dictionary to tell how bad the trip was. Great, covered freight wagons were drawn by mules or oxen over the same road. About 5000 wagons of freight were hauled to California over this road in a single year, and about 50,000 oxen and mules were used.

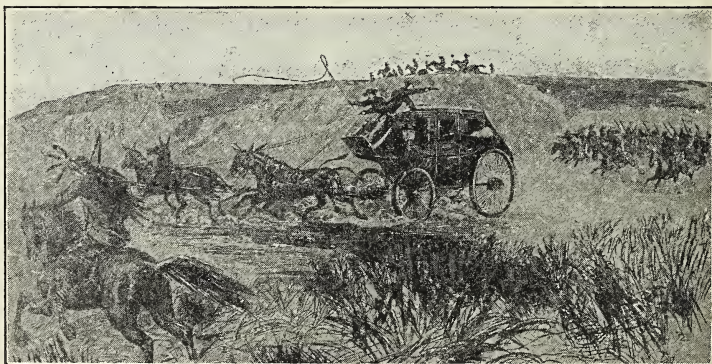
Gold in Colorado. Ten years after the California gold-rush, gold was discovered in Colorado, near Pike's Peak. So many people rushed for the new gold field that they were called the "Fifty-Niners." They came in every possible way. Some carried their belongings on their backs, some used ox-teams, and others even used push-carts. Some had written "Pike's Peak or Bust" on

the sides of their wagons. Later they traveled back with the word "Busted" written below. Denver soon became a thriving city.

The Pony Express. In the same year silver was discovered in Nevada, near Lake Tahoe. Then Carson City sprang up, and soon grew to be a city. Business for the stages increased, but they could not carry news and important messages fast enough; so the Pony Express was planned. Hundreds of the finest horses were bought for

the purpose, and young men who did not weigh over 125 pounds were to ride. Each rider was told to run if attacked, rather than fight. The one thing he must do was to keep the mail going. The railroad had been built as far west as St. Joseph, Missouri. From there the Pony Express took the mail.

No rider was allowed to carry more than twenty pounds of mail. The mail pouches were made of fine, light leather, and all letters had to be short and written on thin paper. Newspapers were printed on tissue paper. The mail was first wrapped in oiled silk to



Courtesy University of California

Fig. 492. For 2800 miles the stage made its way over plains, mountains, and barren desert. The bodies of the coaches were water-tight so that they could be floated across rivers.



Courtesy First National Bank, St. Joseph, Mo.

Fig. 493. On April 3, 1860, Johnnie Frey, the first man to ride the Pony Express from St. Joseph, Missouri, started out on a beautiful black horse. At exactly the same time, the eastbound mail started from San Francisco. Today there is a monument to these early Pony Express riders in St. Joseph.

keep it dry. The postage was at first five dollars for a letter, and later one dollar.

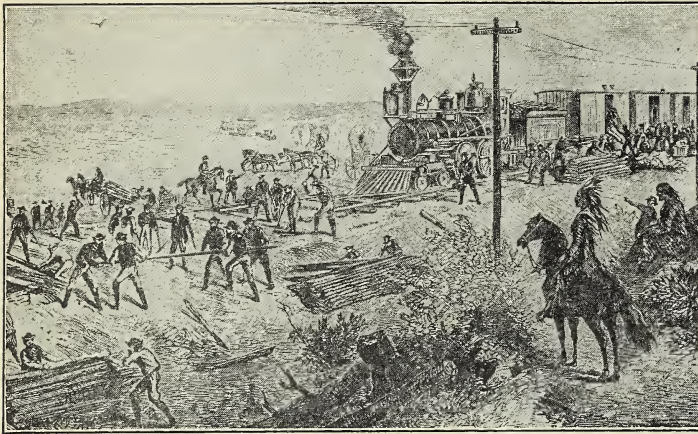
Horses were changed every ten or fifteen miles. When the express came dashing up to a station, another horse was ready to take the place of the tired one. The rider loosened the mail-bags, jumped from one saddle to the other, and rode away to the next station as fast as the horse could gallop. Each rider covered about forty-five miles.

These pony riders followed the Oregon and California trails from St. Joseph, Missouri, up the Platte River through Bridger Pass to Salt Lake City, then across the Nevada deserts to the Sierra Nevada Mountains. The snowdrifts were often thirty feet deep in the mountains, but the snow was packed down by strings of pack horses that kept going all the time. So up the mountain past Lake Tahoe and Donner Lake they rode, and down the other side of the mountain to Sacramento. From there the mail was taken to San Francisco by fast steamer. The first trip West took a little less than ten days.

One Pony Express rider's route lay along the Sweetwater River in Wyoming, and it

was a very dangerous one on account of the Indians. One day when the rider reached the station where another man was to take the mail, he found that his partner had been killed. He took the fresh horse and rode on for the next seventy-six miles. By the time he had ridden back, he had traveled 304 miles without stopping except to change horses.

In September, 1923, riders were selected to gallop over the 2180-mile trail that was once followed by the Pony Express. There were only a few white-haired men and women who could remember the days when the mail was brought by pony riders. In their day Salt Lake City was the only town of any size on the way. The riders of 1923 beat the best record of the Pony Express riders by 42 hours, but they did not have to dodge Indians, ford streams, or go around herds of buffalo. In the days of the Pony Express, anything that came in sight meant danger. War parties of Sioux or Snake Indians often threatened the lonely rider, but the riders of 1923 met none of the dangers of the old days. They had good roads and bridges, and automobile lamps lighted the roads for



From a contemporary print

Fig. 494. Building the Union Pacific railroad across the prairies

them at night. Airplanes flew over their heads, and telegraph, telephone, and radio told the country of their progress. Along their route were towns, cities, farmhouses, orchards, wheat fields, and herds of cattle.

Samuel Morse and the telegraph. The men who owned and ran the Pony Express were losing money, although they received five dollars for each letter carried to San Francisco. Then the telegraph came, and messages could be sent from New York to San Francisco in a moment. The Pony Express with its brave riders was no longer needed.

Just about the time that Fremont was exploring the Great Basin, Samuel F. B. Morse built his first telegraph line from Washington to Baltimore with money the government had furnished. Morse began life as an artist, and he had gone to England to study painting. On the ship returning to America the conversation one evening was about experiments. A Dr. Jackson remarked, "Electricity passes almost instantly through any wire no matter how long."

Morse said, "If electricity can go through a wire ten miles long, it can go around the world."

Morse dropped his painting and set to work to make a machine that would send messages long distances over the wires. After working at it for two years, he made a machine that he patented. For seven years more he worked to make a better machine and to get money to build a long line to prove that it would work.

He asked Congress to give him \$30,000 to build a line from Washington to Baltimore, but the members of Congress made fun of his invention. One man said he might better build a railroad to the moon.

It was the last night of the session of Congress, and Morse was discouraged. "I have a terrible headache," he said to a friend. "I have worked seven years on this invention and have spent all of my money. If Congress does not give me this money, I am ruined. I have not money enough to pay my board bill."

He went home thinking he was ruined. But Congress voted to give him the money, and Morse became an honored man. The first message sent over the wire was, "What hath God wrought?" Morse sent it to Baltimore, and it was sent back. Soon the telegraph spread all over the United States and all over the world.

The first railroad to the Pacific. And now the old stage-coaches were too slow, and to travel in them all the way across the country to California was too hard work. A half million

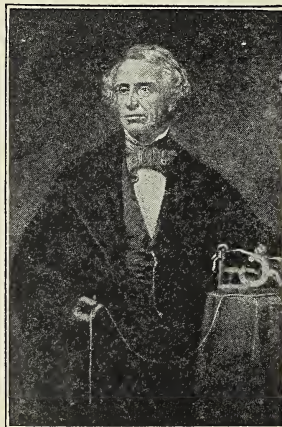


Fig. 495. Morse and his first telegraph instrument

people on the west coast wanted to be nearer their friends in the East. It took many weeks to go around Cape Horn, many weeks to go by way of Panama, and the trip by stage from St. Louis was hard and dangerous. For several years there had been talk of building a railroad across the country to the coast. At first people could not agree as to just what route should be followed in building the railroad. Finally it was decided that it should be built over the Oregon and California trails that Fremont had marked out.

The Union Pacific Company was to build a road from Omaha, Nebraska, west. The Central Pacific Company was to build a road to meet it, east from Sacramento and across the Sierra Nevada Mountains.

The building of the two railroads was a hard task. The ties for the Union Pacific had to be hauled by wagon from Iowa and Missouri, for there were few trees between the Missouri River and the mountains. The first real tree they came to in the building of the road was named the "Thousand Mile Tree." The railroad from the East to Omaha was not completed, and so rails and spikes, and even locomotives, had to be hauled to Omaha from St. Louis or St. Joseph.

California furnished plenty of trees from which to make ties for the Central Pacific, but all of the iron and steel, locomotives, and cars had to be shipped by boat around Cape Horn to San Francisco and up the Sacramento River. Then, this road had to be built through high mountains. Since it was almost impossible to work at anything else in the deep snows of winter, the tunnels through the mountains were dug in the winter. The snow could not trouble the men underground. The workers on the Union Pacific were



Fig. 496. Building the Central Pacific across the mountains. In the picture are some of the Chinese laborers.

mostly Irish from the Old Country. Those on the Central Pacific were Chinese, who were brought to this country for the work.

The two railroads meet in Utah. The two companies raced to see which could build the most track. One day in May, 1869, the two roads met at Promontory, at the northern end of Great Salt Lake. The last ties and rails were laid, and two locomotives came toward each other. A silver spike from Nevada was driven with a silver hammer. Arizona gave the iron, silver, and gold spike that was driven next. The last spike was a gold one from California. As that last spike was driven by the President of the Union Pacific, the telegraph carried the three strokes all over the country. The answer came back: "Bells are ringing and people rejoicing." The western part of the continent could now be crossed in three days.

QUESTIONS TO ANSWER

1. Locate the Great Basin. Why are there so few cities? Much of the soil is fertile; why is not more of it used for crops? What winds blow over that region? What mountains squeeze out the rain?
2. Can you explain why this region is called a basin? Tell why the lakes are salt.



Courtesy Southern Pacific Lines

Fig. 497. The Engine from the West and the Engine from the East meet at Promontory, Utah.

3. On the wall map of the Western states show the routes that Fremont followed on his trips to and around the Great Basin. 4. See how much of the story of Fremont you can tell, using the map to explain what you are telling. Tell enough of the story of Kit Carson to explain why Fremont hired him as a guide. 5. What nearly happened to Fremont in going over the Sierra Nevada Mountains? 6. What mountains did Fremont find in Utah? How do those mountains help the farmers there?

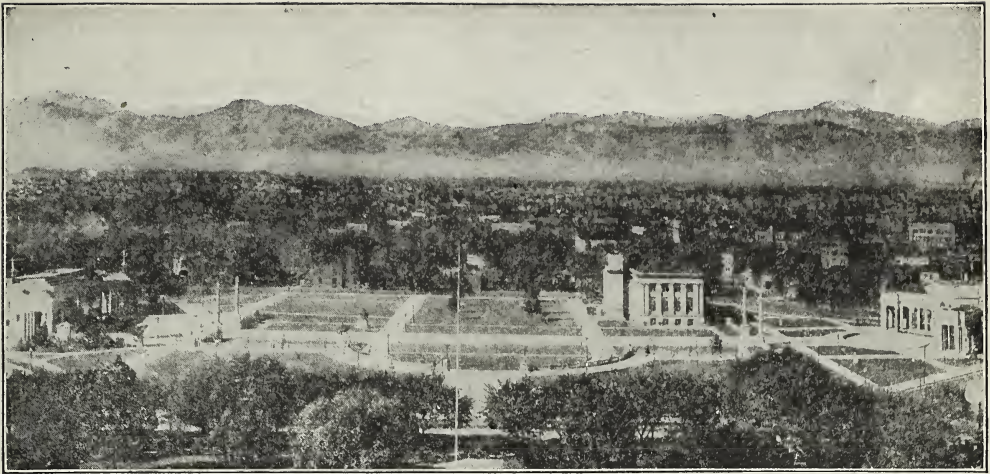
7. Why did the Mormons move to Utah? 8. What kind of country did they find at that time? What did they do to make things grow? What are the crops in this section? 9. How did the "Forty-Niners" get to California? Use the map. 10. Why was the Pony Express started? Tell the story. Trace the route on the map. 11. What put the Pony Express out of business? What can you tell about Morse and his invention? 12. The stagecoach, the Pony Express, and the telegraph followed the Oregon and California trails. What was the next invention to follow the same trail? Locate Omaha and Sacramento. 13. How do we know from the building of the railroad that there were no trees on the Great Plains? What troubles did the Central Pacific have? 14. Describe the meeting of the two roads. Locate the place where they met.

THINGS TO DO

1. On an outline map show the Oregon Trail, Fremont's journey, the Santa Fe Trail, the California Trail, and the Gila River Trail. Show also the rivers, lakes, mountains, and cities told about in your book. Put in the first railroad across the West. 2. Write a little story on "Famous Rivers of the West and How They Helped the Settlers." 3. Draw a train of covered wagons on the Santa Fe Trail.

4. Find out just how a telegraph sends its message; that is, how the words are spelled out by the instrument. What does it cost to telegraph from your town to four or five of the large cities of our country? Be ready to report to the class. 5. Have someone in the class find out about the telegraph cables across the ocean, and report to the class.

Books to read: Barker, Dodd, and Webb, *The Story of Our Nation*, pp. 39-44, 218-219, 267-287, 297-299, 354-362; Burnham, *Hero Tales from History*, pp. 258-265, 274-278; Hubbard, *Citizenship Plays*, pp. 44-70; Mace-Petrie, *Elementary History*, pp. 210-224, 233-244; Nida, *Following the Frontier*, pp. 232-273; Tappan, *American Hero Stories*, pp. 237-254; Vestal, *Happy Hunting Grounds*, entire; Vollintine, *The Making of America*, pp. 212-242; Woodburn and Moran, *The Makers of America*, pp. 224-241.



Courtesy Denver Tourist Bureau

Fig. 498. From a little mining town settled just before the War Between the States, Denver has grown to be the largest city between the Missouri River and the Pacific coast. Mining, manufacturing, livestock, and railroads have made it important.

THE SOUTHWEST TODAY

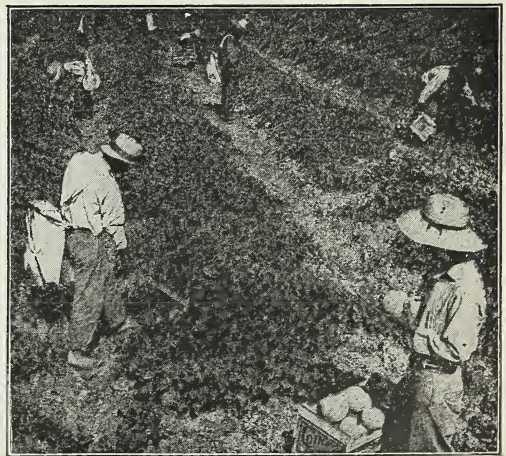
COLORADO

Cantaloupes and sugar beets in Colorado.

Let us see what the southwest part of our country is like today. We will take a train ride to the land of the Spaniards, of Kit Carson, Fremont, and Pike, and of traders on the Santa Fe Trail. Just as Pike followed the Arkansas River, so today a railroad follows the river westward across the plains of Kansas to the mountains of Colorado. As we travel along the Arkansas River into Colorado, the train stops at Rocky Ford. Here, in season, crates of watermelons and cantaloupes are piled up. The first Thursday in September is Watermelon Day in Rocky Ford, and many watermelons and cantaloupes are given away free on that day.

Besides the cantaloupes, we see great fields of sugar beets and many beet-sugar factories. Suppose we stop to see how sugar is made from beets. The factories are usually near the fields, which saves the expense of shipping the beets. The hardest work in growing beets comes when the little plants are tall enough to be weeded and thinned.

Since all the seeds do not grow, many more seeds than are needed must be planted. The weeding and thinning is usually done by hand, although machines to do this work are being developed. Men, women, and children creep along the rows on their knees.



© Underwood and Underwood

Fig. 499. With sticks the pickers push the vines aside to find the cantaloupes.



U. S. Department of Agriculture

Fig. 500. Sugar beets ready for the harvest

The beets are carefully hoed and cultivated during the summer. By fall they have large roots in which sugar is stored. When the beets are ready to harvest, the roots are loosened by a beet plow. Workers pull the beets from the soil, cut off the tops, and pile the roots on trucks to go to the factory. At the factory, machines wash and cut the roots into small slices. A special machine takes the sugar from the slices in a thin solution. This must be evaporated so that the sugar will crystallize. Colorado is the leading state for sugar beets.

The farmers make good use of nearly all the land that is not mountainous. On the irrigated lands along the rivers they raise dry beans, tomatoes and other vegetables, and alfalfa. On the drier lands that lie farther back from the streams are fields of grain and herds of cattle and sheep. Some of the best fruit in Colorado, nearly all of the sheep, and many goats are raised on the west side of the Rocky Mountains. The eastern part of Colorado is in the Great Plains; so we know that many cattle are raised there. Denver and Pueblo are the meat-packing cities for this cattle country.

Mining in Colorado. On the Arkansas River about seventy-five miles from Rocky

Ford, is Pueblo. This city is called the Pittsburgh of the West because so much iron and steel are made there. Iron ore is brought from the mines in New Mexico and Wyoming, while the coal needed for smelting the ore is found in Colorado's own rich coal mines. Not only is coal found in these mountains, but also gold, silver, copper, lead, and zinc. You remember that the discovery of gold near Denver brought the "Fifty-Niners" and the Union Pacific Railroad. As one travels up the streams into the mountains, he sees many tunnels dug far back into the mountains. Ores are taken out of some of these tunnels; others mark the spots where men have hunted for ores.

Two other minerals, not so often heard of, are found in Colorado. One of these, tungsten, is used in making the little wires you see in the electric-light bulbs. Another curious mineral is carnotite from which radium is made, and which is also used in the manufacture of steel alloy. Since 1923 almost no radium has been produced in this country. Most of it comes from the Belgian Congo. Several car-loads of the ore are required to



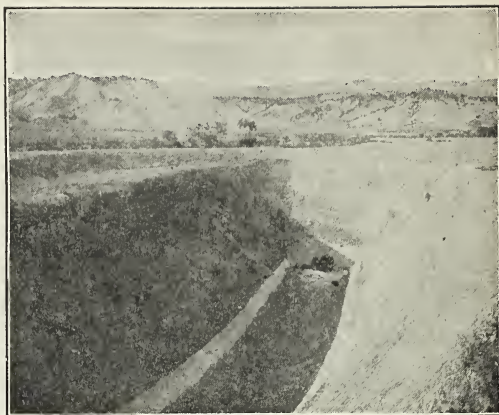
By Ewing Galloway, N. Y.

Fig. 501. This gold mine near Telluride, Colorado, is high up in the mountains, 11,000 feet above the sea.

make a piece of radium the size of a pin head. You can see why radium is so expensive. Denver has plenty of fuel for her many smelters and factories, for there is a large coal field near by. One of the United States mints, where silver is made into money, is located at Denver.

Watering a desert. In western Colorado we may see a wonderful piece of engineering which brings water to desert lands. The Gunnison River here flows through a deep gorge, called Black Canyon. Not far from the river lay a desert country. The soil was rich, but there was no water. Between the river and the desert was a mountain range. It looked almost impossible to get the water from the river over into the desert, but that is just what was done.

In 1900 two young men set out to explore the river and find a way to get the water to the other side of the mountain. They climbed



Visual Education Service

Fig. 502. Gunnison tunnel. On the other side of the mountains flows the river from which the water comes.

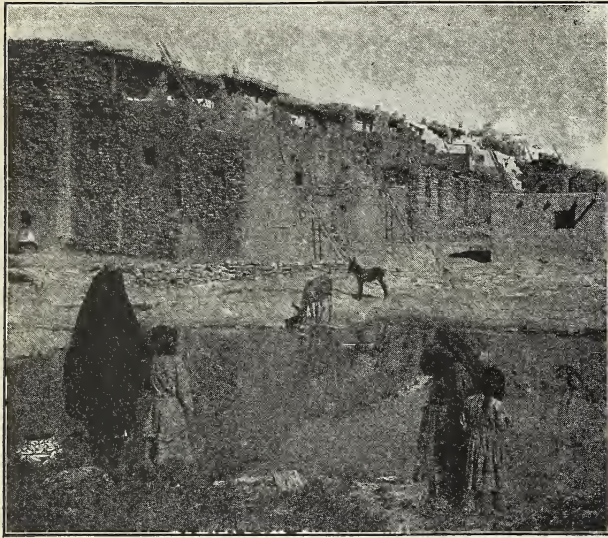
along the sides of the canyon walls until they became too steep; then they swam in the icy water. They finally got through and reported a place where a tunnel could be dug. Work on it was started at once.

One party of workmen climbed down the sides of the canyon and began to dig a tunnel ten feet square through the mountain. Another party started to dig on the other side. For ten long years the work went on. Then one day the two parties of diggers could hear each other. The two parts of the tunnel met almost exactly, and the great Gunnison tunnel six miles long was finished (Fig. 502). The water was turned through; and now, instead of dry desert around Montrose, we may see beautiful orchards and fields of wheat and alfalfa. Hundreds of happy farmers live in the peaceful valley, and a number of villages and towns have been built. The mad, rushing waters of the Black Canyon have made a desert fruitful. On the map (Fig. 503), find Montrose and the irrigated land around it.



U. S. Bureau of Reclamation

Fig. 503. United States Government irrigation projects in the West



Courtesy Santa Fe Railroad

Fig. 504. An Indian pueblo of the Southwest

THE LAND OF THE PUEBLOS

Now let us travel south from Colorado into New Mexico. We take the train from Denver to Santa Fe, the city where for so many years lived the Spanish governor. We remember the days of the Santa Fe Trail and the American traders who hauled their goods over the long weary miles from Independence, Missouri. Look again at Fig. 471, page 320. As we go south we see here and there herds of cattle and sheep and a few farms on irrigated land, but most of the country is too dry for farming. In Santa Fe and Albuquerque we visit some of the old churches and other buildings that stand today as the Spanish built them, and we see many other buildings of today that have been made to look like those of the Spaniards (Figs. 462 and 470).

While we are in this region we take time to visit some of the Indian pueblos, for this is the land of the Indian who built his home of rock or sun-baked clay instead of buffalo hide or bark. We go out to Taos, where we see the home of Kit Carson. It is indeed an interesting region—very different from anything else in our country.

Tuli, the cliff dweller. Dick Bryant and his parents came down to New Mexico one summer for their vacation. One day Dick and his father were walking down the street of the little town of Gallup, when they came upon a Zuñi Indian woman selling blankets that she had made. While bargaining for a blanket, Dick made friends with the woman's son, Tuli, a boy about his own age. Tuli was as interested in Dick as Dick was in Tuli; so the Indian boy asked Dick to spend a day or two with him in the pueblo, or village, on the reservation. Mr. Bryant told Dick to go ahead; so the boys mounted a couple of burros, or donkeys, and set out for Tuli's home.

As the boys jogged across the desert, Dick saw a few herds of sheep grazing here and there, and the blankets worn by the herders made bright spots of color on the landscape. After they had ridden several miles, Tuli pointed out his pueblo, nestled against one of the high cliffs just ahead. The houses seemed to be on top of each other. You might almost say that the whole village was one big apartment house. The roofs of the first row of houses were the front yards of the second row, just as they were in the days of Coronado (Fig. 504).

Dick noticed that the fronts of the houses were built of slabs of rock plastered with clay or mud, but only the fronts were built in that way. When they went into the house, Dick was surprised to see that the rooms were dug far back into the cliff, and the mud-plastered walls were white-washed and clean. Everything was as neat as it could have been in Dick's own home. Hanging against one of the walls was a gray and red blanket. As Tuli pushed it aside, Dick saw that it served as a door to another room. In one corner of this room ears of corn were stacked up like

wood against the wall, waiting to be ground into meal. On a shelf stood pottery jars of beautiful colors and patterns.

Dick was hungry, and he began to wonder what they would have for supper. Soon he saw Tuli's sister mix some coarse hand-ground corn meal with water. She pulled a hot stone slab from the fire in the front yard, brushed it off clean, and spread the corn mixture on it. In a short time she had baked several corn cakes, crisp and sweet. These cakes and a pot of cooked meat were placed on the floor, and they all sat down in a circle and ate the cakes and meat.

After supper the boys watched the changing colors on the rocks as the sun went down. Beautiful reds, purples, blues, and violets shifted here and there as the sun sank lower and lower over the mountains. And then the sheep herders' fires glowed like fireflies on the desert. Bedtime came, and Tuli's mother wrapped Dick in a thick, warm blanket, for the nights are very cold in the desert.

An Indian silversmith. In the morning the boys went with Tuli's father to see him work. He was a silversmith, who pounded out silver bracelets to sell to tourists. He set turquoise stones in some of these bracelets. He told Dick that all Pueblo Indians prize the turquoise highly. They have made necklaces of that stone for thousands of years.

Then Tuli's father told Dick the meaning of the designs he hammered into the bracelets. To his race, each color, as well as each figure, means something. Red means life. A white spot stands for the sunrise, and so means east. Yellow stands for the rich, golden sunset, and means west. The blue of the clear sky means south, and black, the storm cloud, means north.

That afternoon Dick and Tuli climbed to the top of the pueblo, and then to the cliff above, where they found ruins of another pueblo. Tuli told Dick that many years ago his people lived there because the warlike Apache Indians of the plains often attacked

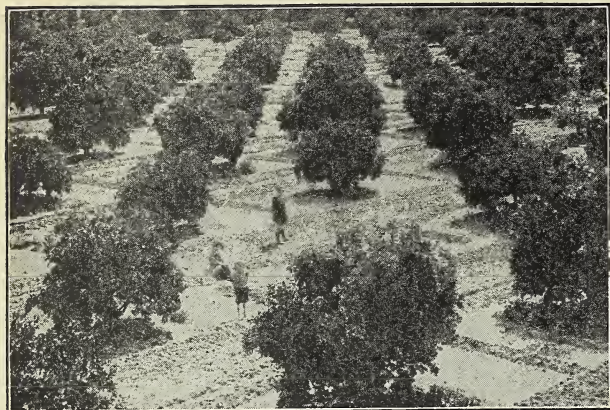


Courtesy Santa Fe Railroad

Fig. 505. An Indian pottery maker

and robbed them. The Zuñis used to carry their grain up there and store it in the cellars to hide it. The cliff was so high that the Apaches could not climb up. Now that the Government had made the Apaches behave themselves, Tuli's people had moved their pueblo down near the bottom of the cliff. Dick asked Tuli if this pueblo was one of the fabled Seven Cities of Cibola for which Coronado had hunted 400 years ago, but Tuli had never heard of Coronado. When it was time for Dick to leave, the boys rode the little burros back to Gallup, and Dick said good-by to his little Indian friend.

Southward to El Paso. We leave Santa Fe and the pueblo country and continue our journey south to the fine city of El Paso, Texas, whose name comes from the Spanish word for pass. There is a pass in the mountains near by. We can look across the Rio Grande to Juarez, a town in Mexico. We are in the western tip of Texas, far from the Gulf of Mexico where we learned about oil and cotton. We realize what a big state Texas is when we are told that it would



U. S. Department of Agriculture

Fig. 506. A fruit orchard on irrigated land in the Southwest

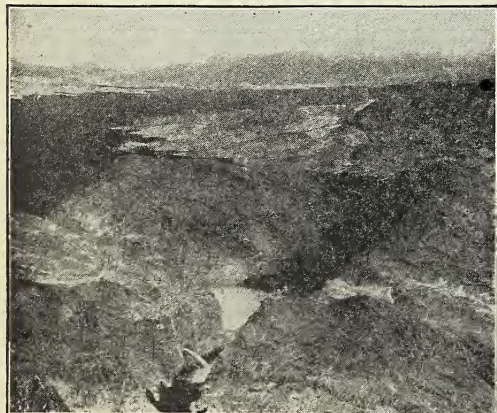
take twenty-four hours, a day and a night, to travel from El Paso to Houston. Turn to the map on page 238, measure the distance, and then find from the scale of miles how far it is. We easily believe that Texas is the largest of our states.

Not only are we far from Houston, but we are high above it, for all the way to San Antonio the land slopes down to the level of the Gulf Coastal Plain. We find that it is just as dry here as it was around Santa Fe, and we learn that this region from southern California eastward across Arizona and Nevada is about the driest part of our

country. Even the mountains are bare of trees. In the Pacific Northwest we found the mountain slopes covered with trees. On the dry plains of west Texas and New Mexico is a great beef-cattle and sheep country. You remember that the Spaniards who settled this region lived on great ranches and raised cattle on these same plains. Thousands of goats are also raised in this region.

Farms and fruit orchards along the Rio Grande. Since the country about El Paso is so dry, crops will not grow without irrigation. Ele-

phant Butte Dam, one of the large irrigation dams in the United States, is just north of El Paso in New Mexico. The water from the great lake made by this dam flows out over thousands of acres of land, furnishing water for fine dairy, fruit, and vegetable farms, and for great cotton fields. Along the Rio Grande south of El Paso are other irrigation dams, which provide water for a new and fine fruit-and truck-farm region. The farmers ship their produce north at about the same time as the farmers of Florida. Thousands of acres of grapefruit orchards bear many carloads of this fine fruit. Most of the fruit and



U. S. Government Photo

Fig. 507. Air view of Boulder Dam



© W. C. Thompson

Fig. 508. Yucca trees and cactus of the desert.

vegetables from this region are shipped to the northern cities of the Mississippi Valley.

Desert country. Now we shall leave El Paso and journey westward into Arizona. We are traveling along the very southern edge of our country. It is only a few miles over into Mexico. We realize what General Kearney and his soldiers must have suffered when they marched over this baking hot, dusty country on their way to California. At times the hot wind full of alkali dust blows in through our car windows and nearly chokes us.

While we are in the desert country, we learn how hard it can rain there. Suddenly great thunder clouds appear in the sky, and in a few minutes the rain falls in sheets. Water rushes down a creek bed that a few minutes before had been dry and hot and dusty. We see that the Indians of this district have made little dams along the creek valley to keep the water from washing away their little crops of corn, squash, and potatoes, and to hold the water for the plants.

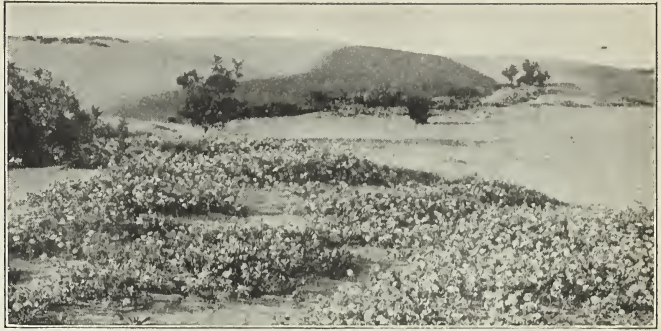
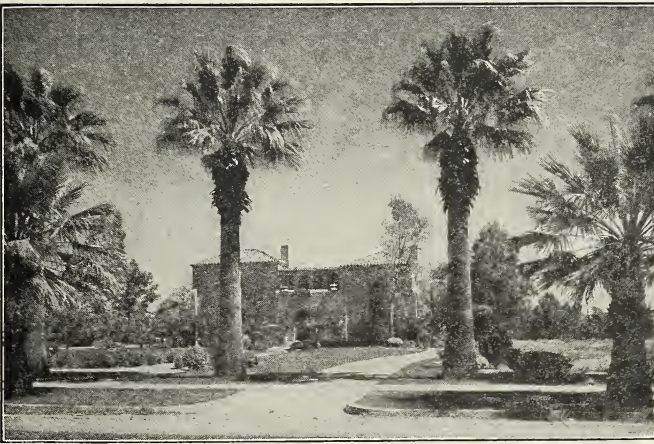


Fig. 509. The railroad carries us through desert country like this. Visual Education Service

Roosevelt Dam and Boulder Dam. We go on to Tucson and up to Phoenix. After the hot, dusty desert country we enjoy the green lawns, beautiful with ferns and palms. Wide fields of alfalfa and cotton, orange groves, and dairy and truck farms surround the city. The land is irrigated with water from Roosevelt Dam on the Salt River. Roosevelt Dam was built by the United States Government. It was expensive to build, costing many millions of dollars. It supplies water to a larger number of acres of land in the region, and electric power to many homes and factories.

Later, Boulder Dam was built on the Colorado River, near Las Vegas, Nevada. It is the highest dam in the world and took nearly five years to build. Lake Mead, made by the dam, is 115 miles long, the largest artificial lake in the world. About a million acres of irrigated lands in Southern California and Arizona now get water from Lake Mead, and about a million more acres of desert can be irrigated by it. An aqueduct has been built to carry water to about thirteen cities of Southern California. The water-power is also used to make electricity.



Courtesy Santa Fe Railroad

Fig. 510. A home in Phoenix. All through the Southwest we find buildings like this, of the same style that the Spaniards followed.

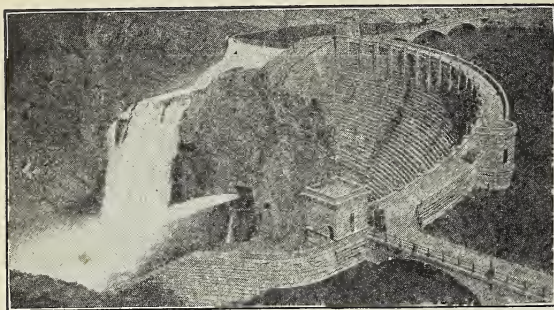


Photo by Talbot. Courtesy U. S. Forest Service

Fig. 511. Roosevelt Dam in the Salt River, near Phoenix

Arizona furnishes much of the copper that is used for electric wire and for many other articles. Ordinarily Arizona produces more copper than any other state, Montana next. Copper mines are found mostly in the southeastern part of Arizona at Tucson, Tombstone, Bisbee, and Nogales. Arizona is also rich in silver, lead, zinc, and gold.

The country between Phoenix and Yuma is dry, for Yuma is the center of a desert region. On the map you will notice that the desert has different names and extends into Mexico. At Yuma the air is so clear and so little rain falls that one hotel advertises: "Free board every day the sun does not shine." It is warm here most of the winter. In the summer the temperature sometimes goes up to 120 degrees. This land is very low and there is no rain in the summer. Mountains rise up on all sides, so no breeze can reach it from the sea.

QUESTIONS TO ANSWER

1. What city is called the "Pittsburgh of the West"? Why? 2. What is the great city of Colorado? What kinds of business would you expect to find there? 3. How have men made farms out of desert country in the Southwest? Use the map on page 341 to help show what you are telling. 4. How is sugar produced in Colorado?

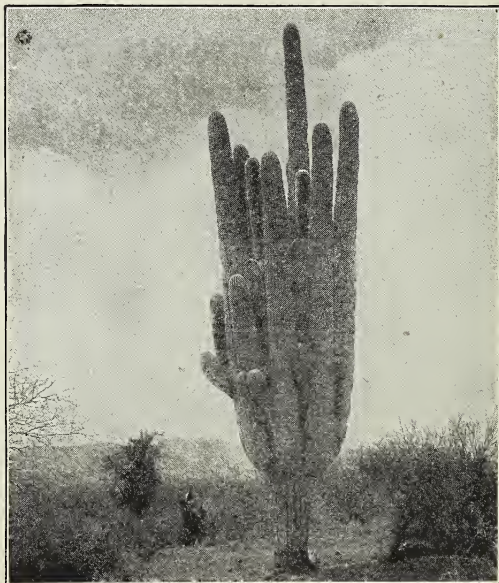
5. Which section of Texas raises truck and fruit? What fruits are grown? 6. If you should visit New Mexico, what kind of farming would you expect to see? 7. What towns would you expect to visit? 8. Of what material are many of the buildings

made? Why can this material be used in this part of our country? 9. What mountains are there in New Mexico?

10. What minerals are found in Arizona? 11. What do the Indians of the Southwest make to sell to the white people? 12. What food do the Pueblo Indians have? 13. Why were pueblos first built on the cliffs? 14. In what way is travel sometimes disagreeable in the desert? Does it ever rain there? 15. What dam has the United States Government built on the Colorado River? 16. What city in Arizona is the center of the desert?

THINGS TO DO

1. Make a sketch map of the Southwest and locate the principal rivers, cities, and products. Perhaps you can draw pictures of some of the products in their proper places. 2. Make a picture of an Indian vase. 3. See if you can draw a picture of a pueblo colored by a beautiful sunset. 4. Add the Santa Fe railroad to your outline map. 5. Write a letter to a friend about a vacation in the land of pueblos. 6. If anyone in the class has ever visited the Southwest, have him tell the class of his visit. 7. From newspapers, magazines, and railroad folders get pictures of the Southwest and make an exhibit.



Courtesy Southern Pacific Lines

Fig. 512. A giant cactus of the Arizona desert



Courtesy of the M. H. DeYoung Museum and the Univ. of California

Fig. 513. Santa Barbara mission in the days of the padres

CALIFORNIA—LAND OF MISSIONS, FRUIT, AND GOLD

SPANISH MISSIONS AND SETTLERS

Padre Serra and the missions. About the time that De Soto discovered the Mississippi River, a Spaniard named Cabrillo sailed along the coast of California and stopped in the harbor of San Diego. Other Spaniards sailed along the coast, but no settlements were made until 1769, when a Spanish mission was built at San Diego. The story of San Diego mission is the story of Padre, or Father, Junipero Serra. About the time the colonists along the Atlantic were fighting the War for Independence, Padre Serra and his followers were sent from Mexico by the king of Spain to teach religion to the Indians of California. The party started from San Blas on the west coast of Mexico with three ships loaded with supplies needed for making a settlement—seeds, fruit trees, grapevines, wheat, shovels, axes, besides all the articles needed for the church services. Padre Serra and a small company marched overland from La Paz, at the southern end of Lower California. Finally, after great hardships, they reached the Bay of San Diego and found the ships anchored in the harbor waiting for them. There was great happi-

ness. The men were so overjoyed that they fired their muskets, which so frightened the Indians that they ran away and hid.

The Indians. These Indians were not like Pocahontas and Massasoit, nor as civilized as the Indians of the pueblos of Arizona. They used very little clothing in summer, but in cold weather they wore skins of animals. They did not grow crops, but ate food they could find easily. There was plenty of game in the mountains, but they were too lazy to hunt. They lived chiefly on plants, fish, and small animals. Sometimes they set fire to the grass around a shallow pit and thus drove the grasshoppers into it. When the grasshoppers' wings burned off and they could not get away, the Indians scooped them up and ate them. For their bread they ground acorns and nuts into a kind of flour. Sometimes they dried fish for winter and stacked them about their rude huts of poles and brush. There was much misery and sickness among them all the time.

The building of the mission. Padre Serra chose a place near San Diego for his mission, and he and his followers set to work to build a temporary church. In the branches



Fig. 514. Santa Clara mission in the days of the padres

of a tree they hung bells, and they made a large cross which they raised high in the air. The priests then rang the bells, fired their guns, and sang hymns to bring the Indians to their mission. When the Indians heard these strange noises, they came running. At first they were afraid of the guns, but they admired the bells and the priests dressed in their robes. When the Indians came close enough, the priests gave them food and presents so that they would come again.

The priests now set to work to build a real mission. For materials they used stones and sun-baked mud bricks mixed with chopped straw. The buildings were set around a court, or patio, with a wall surrounding all the buildings. The church stood at one corner of the court, with the rooms, or cells, for the priests near by. Then came the kitchen, the dining-room, and the store-rooms. Along one side there were rooms for any guests who might come. The shops for the different kinds of work were built on the opposite side of the court. The roofs were made of heavy beams covered with tiles of baked clay.

Life at the mission. At first the supplies had to be brought from Mexico by boat or pack train. But after a time the Indians became

friendly, and many of them were baptized and came to the mission to live. Then they were taught to care for flocks of sheep and herds of cattle. Water was brought from the hills, and groves of oranges, olives, dates, figs, and peaches, and vineyards of grapes were soon growing about the mission. Grain and vegetables were planted, and there was plenty of food for all. The Indians taught the padres to make bread of acorns and pine

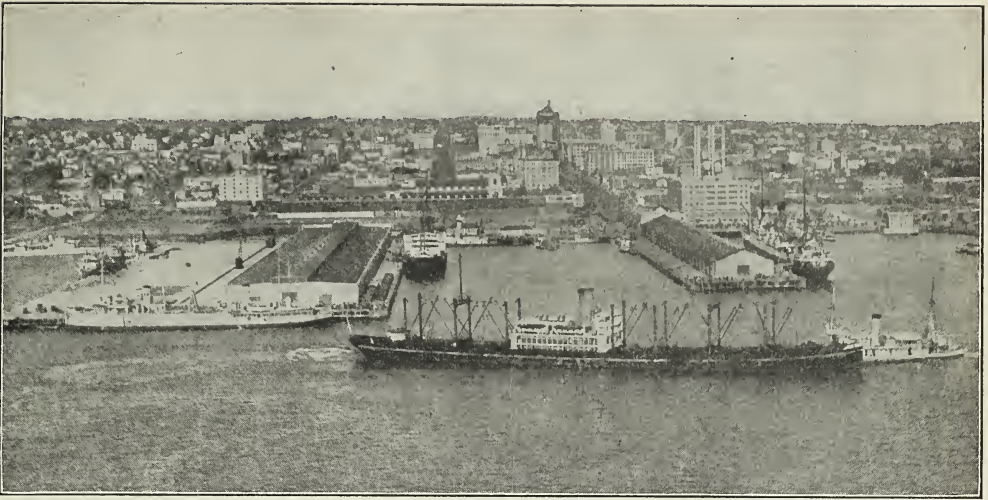
nuts, and to cut beef in strips and dry it. The mission prospered.

As time went on hundreds of Indians came to live in and around the mission. These hard-working priests had taught them a new way to live. The story of Sanchez, a little Indian boy of the mission, will show you how they lived. When the church bells rang in the morning, he went with his father and mother to the church to spend some time in prayer. At the same time a breakfast of porridge was cooking in great kettles in the mission kitchen. Sanchez was sent to the kitchen with a big bowl to get a supply of barley porridge which his family ate in



Courtesy Tulare County Board of Trade

Fig. 515. Irrigated vineyards. Do you see how the water is carried through the orchard by ditches?



Courtesy Southern Pacific Lines

Fig. 516. The water front at San Diego, the first settlement in California. Nature made only three good harbors on the long Pacific coast of our country: San Diego at the southern end, Puget Sound at the north, and San Francisco in the middle. Can you name other cities that began as settlements on good harbors?

their own hut. During the forenoon Sanchez's father worked in the field or watched the flocks, and his mother wove coarse cloth at the loom. At noon, when the bell rang, they all stopped work and came in for a dinner of thick soup, or porridge, made of wheat, corn, and beans. At five o'clock there was another hour of prayer, and then the evening meal.

Sanchez was always glad to have Sunday come round. On that day everyone had a great feast of meat and other good things to eat. The rest of the day was spent in games and good times. The Indians were all taught that they must do something useful. When an Indian family once joined the mission, they were not allowed to leave it without permission. The padres treated the Indians like children—taught them how to do their work, and punished them with whips when they did not obey.

Visitors were always welcome at the mission. The guest need not ask for food or shelter. He was always fed and given a comfortable bed. When he was ready to depart, perhaps Sanchez and his father would be sent

to drive in the horses so that the visitor might select a fresh horse for his journey.

The end of the mission days. Padre Serra was gentle, loving, and unselfish. He worked hard and looked after the building of nine missions. San Diego was the first, but San Carlos, near Monterey, was the most famous. It was there that he lived the last years of his life. When he died, the Indians wept for the loss of their padre. The padres founded twenty-one missions in all, one day's journey apart, from Mexico to San Francisco. Find them on the map on page 317. These missions, started a few years before our War for Independence, went on for about fifty years. Soon after Mexico won its freedom from Spain in 1821, the Mexican government ordered the missions to give up their lands. It was thought that the Indians could now care for themselves; so the mission lands were divided among them, and they were given cattle, sheep, seeds, and tools. Most of the priests returned to Mexico. The Indians were like children; some took horses and rode away to the mountains, saying, "We are free. We shall no longer plow and sow."



Courtesy of the M. H. DeYoung Museum and the Univ. of California

Fig. 517. The Spanish of early California days were fine horsemen and loved horse-racing.

Soon the cattle were gone, the fine gardens and orchards grew up to weeds, and the mission buildings fell to ruin.

Other settlements. The missions, however, were not the only settlements in California. Wherever a mission was built, there was also a presidio, or fort, with soldiers. And then, Spanish and Mexican noblemen were given great grants of land, or ranches, of thousands of acres each, on which they settled and made their homes just as they did around Santa Fe, New Mexico. The houses on these great ranches were well built, and fine furniture and furnishings were brought from Spain. These ranchmen raised thousands of cattle and sheep. They used the poorer inhabitants of the country to do the work. The small ranchmen and the laborers lived in the pueblo, or village. It is hard for us to imagine that the great city of Los Angeles was one of these villages. San Francisco was another. It was settled by a colony of 243 Spaniards who journeyed overland from Arizona. In the center of each village was a plaza, or square. On one side were the homes and on another side were the stores. An adobe wall was built around the village to keep the cattle and horses from running through the streets.

To ride a good horse, to eat, and to dance were the greatest pleasures of the early Californians. They went to church on Sunday, and on the way home stopped at a friend's house to feast and to dance. Their food was mostly meat, beans, onions, and peppers. They had very little milk and butter. The ladies were fond of dress, and in every Spanish home there were silks, satins, laces, and velvets, brought over from Spain and worn on all grand occasions.

The coming of the traders. Spain, as you know, did not want the Americans to trade with her colonies in this country. But when Mexico gained her freedom from Spain, many American sea captains began to sail their clipper ships around Cape Horn to California. When a ship came into the harbor, cattle were driven down to the shore and sold to the sailors for fresh meat. Hides, tallow, wool, and furs were brought from the ranches in ox carts with big wooden wheels, like those you can see in Figure 514. The ship stayed until its cargo of cloth, silks, shoes, beads, tea, coffee, rice, sugar, etc., were sold or traded; then the ship sailed back around South America home to Boston, Philadelphia, or some other port, with its load of hides, wool, and other products.'



Courtesy Carruth and Adams, and the Univ. of California

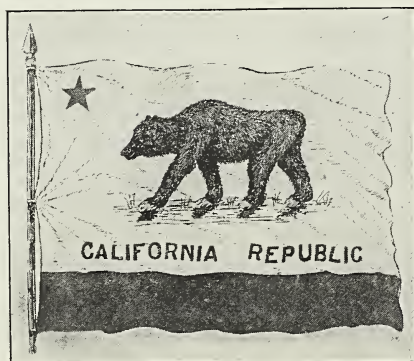
Fig. 518. Admiral Stockton and his men capture Monterey. This building is still standing.

American settlers come to California. In those days the Californians had no idea that the Americans could ever come across the mountains and the deserts to trouble them. When Jedediah Smith, the trapper, came across the mountains to Los Angeles in 1826, the Californians grew suspicious, and the governor ordered Smith and his men to hurry away. After the trappers, came the settlers, for it was not long until the covered wagons of the pioneers were finding their way into the valleys of California. By the time John C. Fremont made his third trip to California, there were several thousand Americans in that part of our country.

The Bear Flag War. The Americans in California disliked Mexican rule as much as the Texans had disliked it, and there were many native Californians, formerly Spaniards, who were also looking for a chance to revolt against Mexico. Fremont asked permission from the governor to explore the country, but he was told to leave at once. He felt sure that war between the United States and Mexico was coming

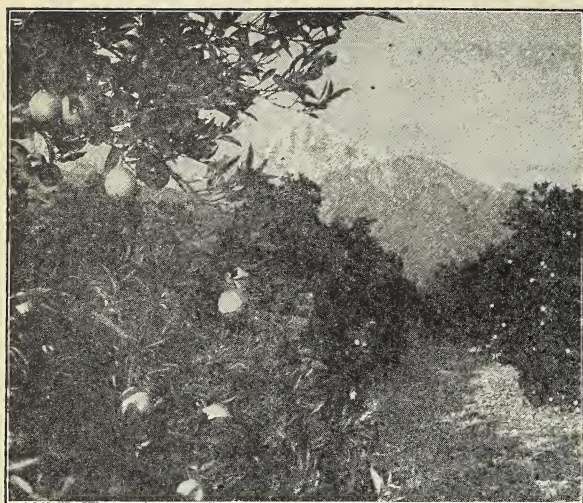
soon; so instead of leaving California, he built a fort near Monterey and stayed. When the Governor threatened to drive out all American settlers, the Americans and some Californians rebelled and set up a new government of their own. The flag that they made for their new government had on it one star, one stripe, and a grizzly bear; so their little revolt was called the "Bear Flag War." Fremont and his men joined in the fight, and American warships that happened to be in the Pacific captured Monterey and San Francisco. So California was in the hands of the Americans.

Meanwhile the war with Mexico had already been started by our government, although Fremont did not know it. There was no way to send the news of these victories to Washington except by messenger; so Kit Carson was sent. When he had traveled 800 miles he met General Kearney, who had just taken New Mexico and was on his way to California. When Carson told him that California was already conquered, Kearney sent part of his soldiers



Visual Education Service

Fig. 519. The Bear flag of California



By Ewing Galloway, N. Y.

Fig. 520. Orange trees and snow-capped mountains in California

back to Santa Fe and went on to California with Carson as guide. The little army had a hard time on the desert. When Kearney and Carson reached California, they found that the Mexicans had won back Los Angeles. Then there was more fighting, but the Americans soon won, and California was declared a part of the United States. Carson again started for Washington with messages for the President. When he reached Taos, he learned that the Indians had killed many of his friends. His wife had barely escaped alive. He then continued his journey, making his way safely by way of St. Louis. After delivering the messages to the President, he returned to his ranch at Taos.

Carson's later life. At Taos Carson was made United States agent for the Utah and Apache Indians. He was always their true friend. He saw to it that they were fairly treated by the white men, but he was just as sure to punish them if they went on the war-path to kill and steal. In 1853 Carson drove a flock of sheep across the mountains and deserts to California and sold them for a good price. Other people had said that it could not be done. During the War Between the States

he served as a scout with the Northern army and was made a general.

SOUTHERN CALIFORNIA

Oranges and lemons. The people of Southern California have good reason to remember the old padres of the missions. The padres introduced the growing of most of the fruits and nuts that we now find here—oranges, lemons, olives, grapes, plums, prunes, peaches, almonds, and dates. These were grown in Spain, and it was natural that the Spanish padres should have brought them. About two-thirds of the oranges and nearly all the lemons in the country are grown here, as well as many grapefruit. California and Arizona together grow most of the olives, dates, figs, and almonds. Grapes, peaches, plums, pears, and apples are grown farther north in California.

Water for plants and man. The orchards of southern California and Arizona are watered by irrigation from the rivers, for there is little rainfall. In the valleys there is a little rain in the winter, but up in the mountains there is much more rain and snow. The rivers get their water from the mountains. The padres started irrigation in a small way. Now there are great reservoirs in the moun-



U. S. Department of Agriculture

Fig. 521. A grove of olive trees

tains to catch the water in the winter and save it. There are also deep wells from which the water under the ground may be pumped.

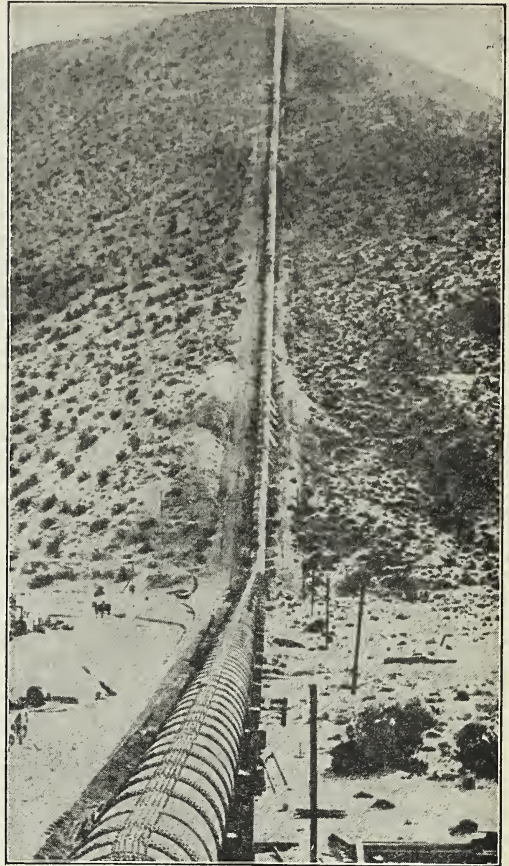
This need of water is bound to teach people to be unselfish and willing to work with others. Since there is only so much water, more land can be irrigated if people will work together. Land not irrigated is worth about \$20 an acre, but with water and orchards, some of the land is worth about \$350 an acre, and some around Hollywood as much as \$3000 or \$4000 an acre.

You may wonder how the large cities get enough water. Los Angeles found that it must have more water to keep growing; so it went across the Mojave Desert to Owens River at the foot of Mt. Whitney, a distance of 240 miles. From Owens River to Los Angeles a great aqueduct, or water-pipe, was built over hills and across valleys. As the water rushes down the mountain, it is used to make electricity. Los Angeles also receives water and electric power from Boulder Dam.

Southern California, a health resort. Fruit-growing is not the only reason so many people live in Southern California. Thousands of people come here for their health and decide to stay. Others come to enjoy an outdoor life and to get away from the cold northern winters. The climate here is mild and even, and very pleasant. In San Diego the temperature seldom goes down to freezing or above ninety degrees. All along the coast the temperature is even. Back from the coast fifty or one hundred miles it becomes very hot in the summer.

The padres gave this section its Spanish style of houses and public buildings (Figs. 510 and 513). The walls of Spanish houses are thick to keep out the heat, and the windows small to shut out the glare of the bright sunlight. The tiled roofs are usually flat. The Spanish style suits this region well just as it does New Mexico and Arizona.

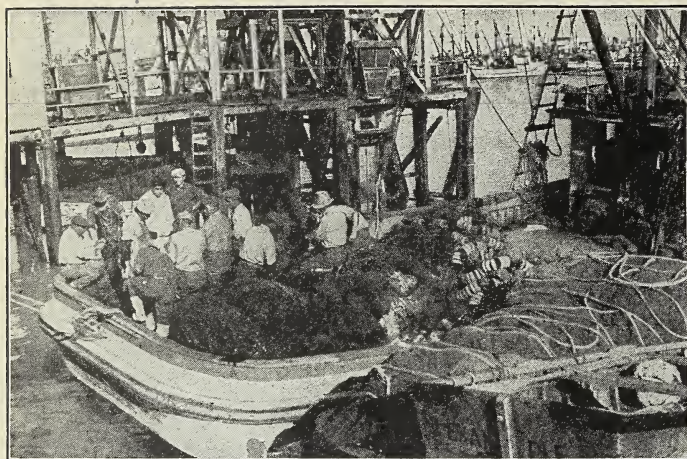
The "King's Highway." North from San Diego along the coast one sees great fields of



© Underwood and Underwood

Fig. 522. The great pipe of the Los Angeles aqueduct is big enough for an automobile to pass through.

beans, and he notices that they are not irrigated. In the early morning heavy fogs roll in from the ocean, and this fog, together with the little rain that falls, makes enough moisture for beans to grow. Besides beans, wheat and sugar beets are grown, and many cattle are raised in the mountains. This road which we have followed out of San Diego is called the Camino Real or "King's Highway," and it was first built for the padres and the soldiers of the Spanish days. The old road came out of Mexico and connected the long line of missions. It ran as far north as the missions near San Francisco.



James Sawders

Fig. 523. Fishermen at the San Pedro docks

Los Angeles. A large city along the "King's Highway," the largest in the Western states, is Los Angeles. This city is surrounded by orange, lemon, grapefruit, and walnut groves. We see hundreds of trucks hauling fruit to the packing houses. Whole trainloads of citrus fruits are sent to the East by the fastest trains so that it will reach the Eastern markets while it is fresh. Fine motor roads connect Los Angeles with the many smaller cities which lie in the midst of orchards to the north and to the east. Many people who work in Los Angeles live in Pasadena. Many Northern tourists spend the winter there. Long Beach is on the ocean.

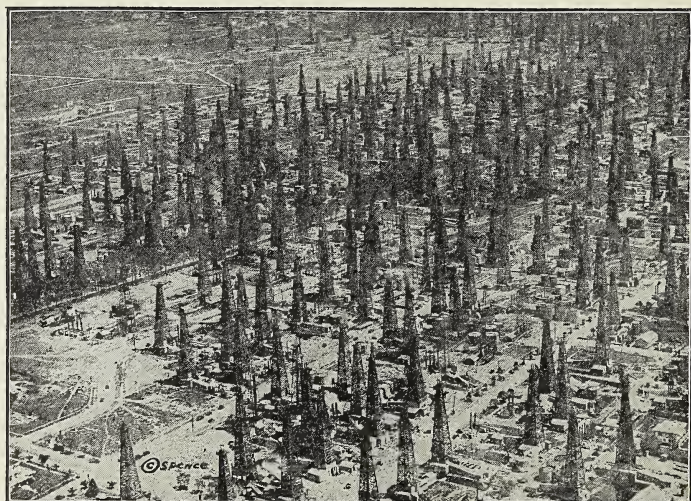
The business section of Los Angeles is fifteen miles from the ocean. The city needed a port on the ocean; so it took in a narrow strip of land down to San Pedro on the coast. Because the harbor of San Pedro was not very good, the city built

a great breakwater two miles long to protect the ships, and dug out the harbor. Now Los Angeles has a man-made deep-water port for shipping (Fig. 525).

There have been few factories in Los Angeles because there is very little coal in California, and the river near this city furnishes no power. But several years ago oil was discovered all about the city. Wells were sunk even in the edge of the ocean west of Los Angeles. Oil was also discovered to the north of the city, near

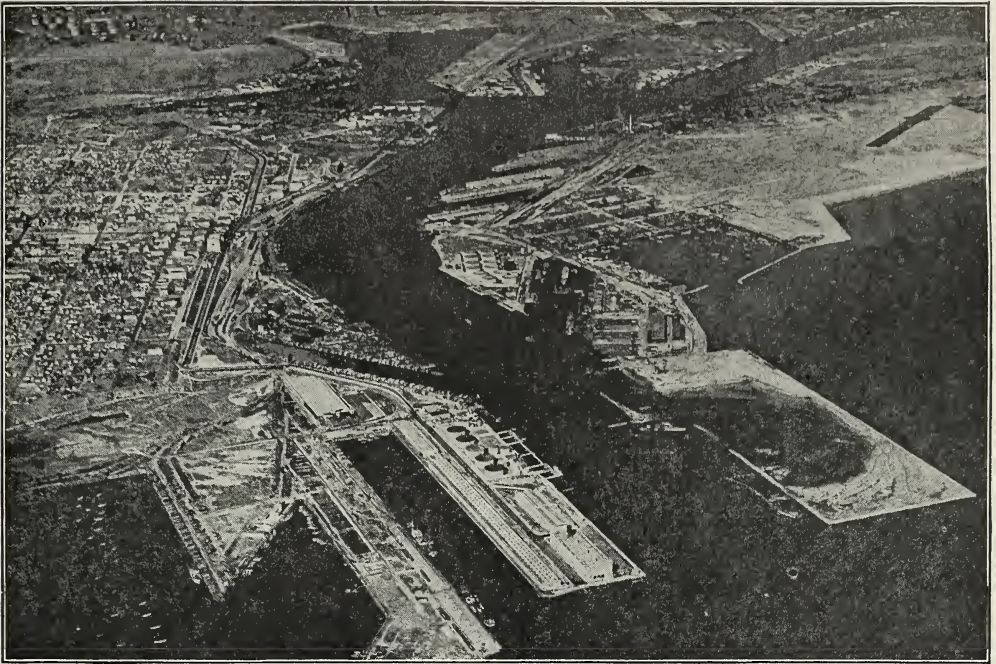
Bakersfield. California is now one of the leading states in the production of petroleum. Los Angeles uses this petroleum for fuel for her factories. It is also used on steamships and locomotives.

Los Angeles, and all Southern California, are noted for sunshine and healthful climate. Hollywood, the greatest motion-picture center in the world, is part of Los Angeles. Pic-



© Spence, from Ewing Galloway

Fig. 524. A forest of oil derricks near Los Angeles



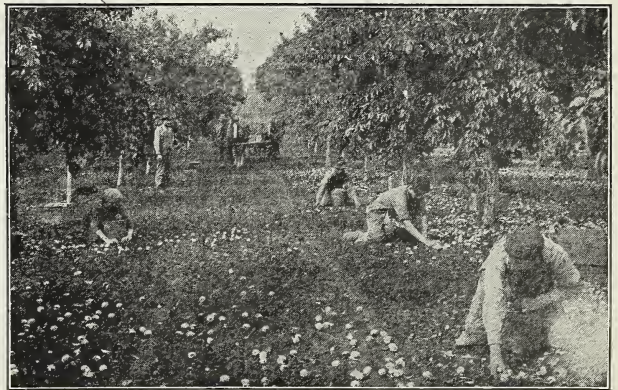
© Spence, from Ewing Galloway

Fig. 525. San Pedro, the man-made port of Los Angeles. Do you see how piers have been built out into the water so that ships may be better protected while they load and unload?

tures can be made here almost any day in the year. The weather is warm and pleasant for working out of doors, and the managers can find almost any kind of scenery they need for pictures in or near the city—deserts, forests, snow-capped mountains, seashore, a large city, Spanish houses, orange groves, etc.

Apples, prunes, and artichokes. It is a fine drive northward along the coast over the King's Highway. The road takes you to Santa Barbara, a beautiful city with mountains as a background, a delightful climate, and a fine beach. On to San Luis Obispo the road runs through narrow valleys where wheat and beans are raised, and where cattle graze on the slopes, but there is not much water for irrigation. Just above San Luis

Obispo the mountains come down so close to the sea that the road runs through Robles Pass over into the valley of the Salinas River. Here are some large cattle and wheat ranches, but everything is very dry. Then we come to



U. S. Department of Agriculture

Fig. 526. A prune orchard in the Santa Clara valley, California. A prune is a certain kind of plum.



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Fig. 529. Colonel Sutter's fort in the days of the gold rush to California

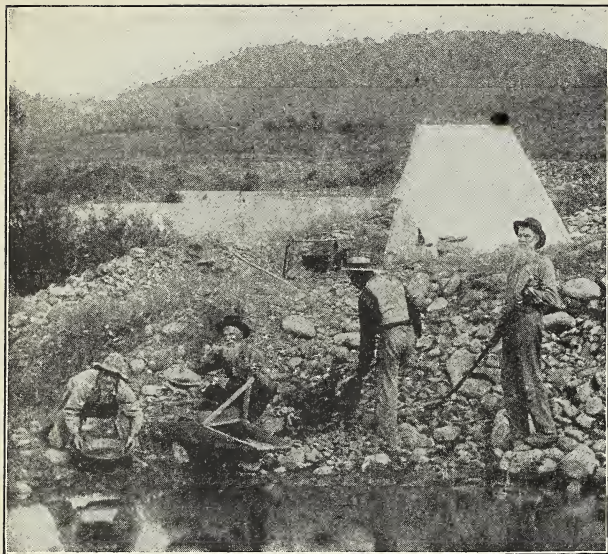
business. Sutter thought he could make money selling lumber if he had a large sawmill; so he hired a man by the name of Marshall to find the best place for a sawmill and to build one. Marshall built a mill near the present village of Coloma, in the foothills of the Sierra Nevada Mountains.

Marshall discovers gold. Marshall was very much interested in the mill, for he was to receive a part of the profits from it. One day as he was walking along the mill race, he saw something glistening in the water. It looked like gold to him, and he was so excited that he jumped into the water and picked up a handful of the bright, shining grains. "It looks like gold; it must be gold; it looks like this gold piece in my pocket. I have found a gold mine!" almost shouted Marshall. He crammed the shining grains into his pocket, rushed to the corral, caught and saddled a horse, and rode fifty miles to Sutter's ranch. Colonel Sutter hammered the grains into thin sheets; he put them in the fire; he poured acid on them. But still they kept their color. "It is gold!" said Sutter, "but it will probably ruin me. We must keep it a secret for awhile. All my men will leave me if it leaks out that there is gold here."

The Gold Rush begins. But neither Marshall nor anyone else could keep such a secret. Soon all the men on the place were shoveling gravel out of the river and washing it for gold. As Colonel Sutter had feared, there was no one left on the ranch to do the work. One man in his excitement rode to San Francisco with pouches of gold in his saddle bags. He tore through the town shouting the news and showing his gold. The whole town went wild. One by one, men left for the gold fields. For weeks there was no newspaper; the printer, too, had gone to hunt for gold. Sailors left their ships, and soldiers deserted the army. The constable could not leave his prisoners; so he took them along with him. Everyone was hunting for gold, gold, gold!

Digging for gold. Since the land belonged to the United States, every miner claimed all the gold he found. After a time the miners made a rule, or law, allowing each man fifteen feet of land along the river bank. He staked his claim, that is, drove stakes at the corners, and the land was his.

The miners separated the gold from the dirt by panning, as they called it. They would fill a large pan with dirt and gravel, pour in water, and shake it round and round



By Ewing Galloway, N. Y.

Fig. 530. Prospectors panning for gold in the sand and gravel

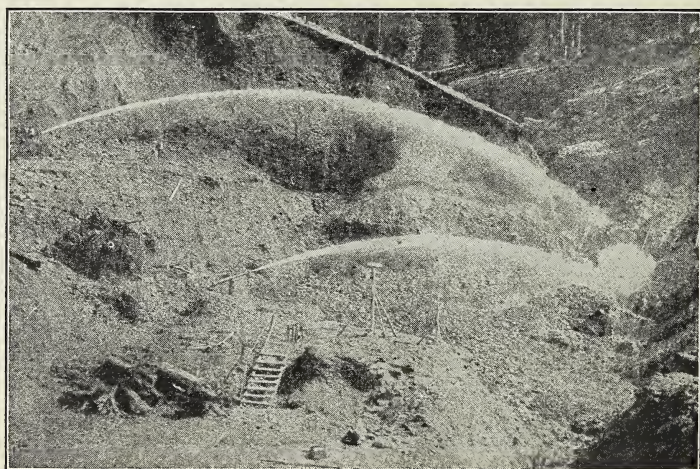
until the dirt came to the top and washed away, and the gold sank to the bottom. Then the gravel and stones could be thrown out, and the gold would be left. One man could dig and wash as many as fifty pans of earth in a day. Each pan would yield from twenty-five cents to five dollars' worth of gold. The miners averaged about sixteen dollars a day. Some lumps, or nuggets, of gold were found that were worth hundreds and even thousands of dollars.

It was a hard life. A few rough clothes, a cooking outfit, and blankets, were all a miner needed. In summer there was no rain, and he did not need even a tent. An ounce of gold dust was worth sixteen dollars in those days. But everything the miner needed cost a great deal. Even a shovel cost an

ounce of gold, a pair of boots cost eight ounces, a barrel of flour four ounces, and a pound of bacon a half ounce. Since money was scarce, gold dust was used for buying supplies. Some men found that standing in water and digging among the gravel and rocks all day in the hot sun was too hard work; so they made money by selling supplies to the miners. One man bought a horse for twenty dollars and rented him for \$100 a week.

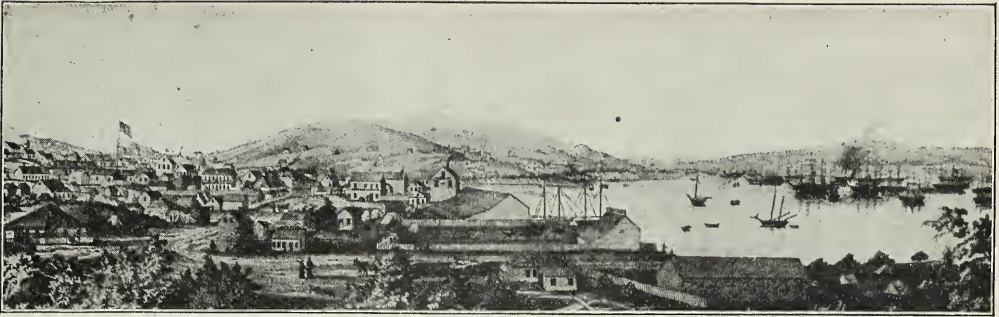
Mining today. Finally mining companies were organized, and the river banks were torn down by the great streams of water thrown on them through a nozzle (Fig. 531). The dirt was washed over a big riffle. These riffles were long, wooden troughs with boards nailed

across the bottom. The swift-running water carried the sand and gravel along, but the heavy gold sank to the bottom and lodged behind the cross pieces. Then when the water was shut off, it could be scooped out. The washing away of the river banks and the hills soon filled up the streams with gravel,



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Fig. 531. Washing the gravel down with powerful streams of water



Courtesy Baneroff Library and the Univ. of California

Fig. 532. San Francisco in the days of the Gold Rush. Seventy-five years before the Gold Rush, Juan de Anza led an expedition of two hundred forty Spanish people from Arizona across the deserts and mountains to make a settlement on the shore of San Francisco Bay.

and you can see today many valleys spoiled for growing anything because of this gravel. Of late years better machines have been invented, and now all the old gravel is being scooped up and run through these machines, which find much gold that the early miners did not get. Gold is still dug in the mountains north of San Francisco. The rock is blasted to break it up into pieces small enough to handle. It is then ground or crushed in great machines until it is something like sand or gravel. After this, the gold is taken out. California produces more gold than any other state. Silver, copper, lead, and zinc are also mined in California, and quicksilver is found near Clear Lake, north of San Francisco.

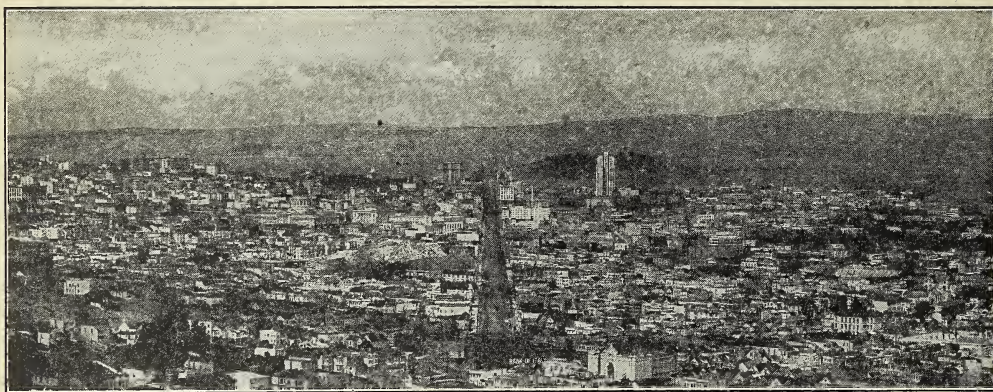
San Francisco. When gold was first discovered, the little settlement of San Francisco had only 800 people. In six months the population was 10,000, and in six months more it was 30,000. The city looked like a patchwork quilt. The people lived in tents and shacks. Anything that would keep off the sun and rain was used for a house. The streets were deep in dust and mud. Before fire companies were organized, the place several times caught fire and burned.

San Francisco is located on a point of land between the ocean and the bay

(Fig. 533). From the shore the land rises to a high hill. The first settlers built their stores and shacks down near the water, but gradually the city spread back on the hills. Market Street runs down the hill to the business part of the city, which is on the shore of the bay. There are the docks where ships from all over the world lie at anchor. The bay is sixty-five miles long and from four to ten miles wide. Ferryboats carrying passengers and freight run from the foot of Market Street



Fig. 533. San Francisco Bay. Do you see what a wonderful harbor Nature made here?



By Ewing Galloway, N. Y.

Fig. 534. San Francisco. Across the bay, on the hillsides and along the shore, are Richmond, Berkeley, Alameda, and Oakland. Over a million people live in the towns and cities around the bay.

across the bay to Oakland, Berkeley, and Alameda. As you drive down Market Street to the ferry, you can hardly believe that most of these fine buildings have been built since 1906. That year an earthquake shook down many buildings. Then fire broke out and nearly destroyed the city.

On the ocean point of land is the Presidio, a United States army post. "Presidio" is a Spanish word for fort. Late afternoon is a pleasant time to drive through Golden Gate Park to the Presidio. Perhaps you may see a great ocean steamer coming through the strait into the bay. As you watch the golden gleams of the setting sun bathe the steamer, the water, and the shores in their light, you know why the strait leading into the bay is called the Golden Gate.

A cold ocean current flows near the shore here. This causes fog in the morning and evening and keeps the towns around the bay cool in the summer. San Francisco is a summer resort for the people of the hot inland valleys back of the bay. And yet it is not cold in winter. Many winters pass without any frost. It is so pleasant throughout the year that men both in factories and out of doors can work better than in almost any other place. Oakland across the bay is a manufacturing city and the center for the

railroads coming to San Francisco. The high hills that rise from the shore of the bay across from San Francisco are covered with fine homes and parks.

You cross on the big new Golden Gate Bridge when you go to Sausalito, on the north shore of the bay. As you drive on north, you pass so many fruit farms that you think California must raise enough fruit for the whole world. You see chickens everywhere—white chickens—millions of them. Petaluma is said to be the greatest chicken and egg center in the world.



James Sawders

Fig. 535. In the California redwood forests

The redwood forests. You enjoy the ride over the smooth highway with its beautiful scenery on either side. The country becomes more and more wooded. Not far from San Francisco you begin to see forests of the wonderful redwood trees, sometimes called sequoias, that grow all along the Coast Range Mountains, from south of San Francisco north as far as Oregon. Muir Woods, near San Francisco, is a national monument of redwood trees. Some of the trees are fifty and sixty feet around, and grow to over 300 feet in height. In one of them is enough lumber to build a big house. The wood is used for many things—shingles, bridges, seats for stadiums, flooring, door and window frames, and furniture. This strip of redwoods which runs along the coast is about twenty miles wide. The largest of these trees are thousands of years old.

There is another tree found in California, also called a sequoia, that is a great deal like the redwood. It is different from the redwood in some ways, though. This sequoia is called the "big tree," and some of them are even larger than the redwoods. They are found inland, in and around Yosemite Valley.

THE CALIFORNIA VALLEY

The mountains in northern California are very rough, and for many years it was hard traveling across these mountains to Oregon. Now fine roads run over the

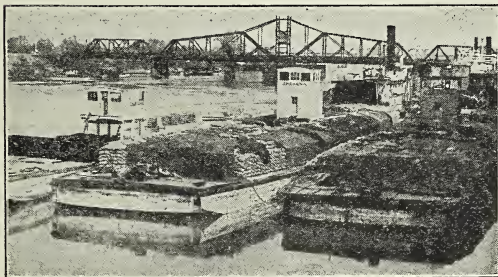


© Keystone View Co.

Fig. 536. An irrigated grove of orange trees

mountains from the Willamette Valley of Oregon to the Sacramento Valley. From Sacramento you can travel south for 400 miles through a great valley that runs down through the heart of California. This is the main highway from Portland to Los Angeles. Turn to the map (page 294) and you will see that the valleys of the Sacramento and San Joaquin rivers form a basin that has but one opening. There are mountains all around except at San Francisco, where the water runs into the Pacific. The summer weather in the California Valley is hot, but it is not very cold in winter. The mountains around the northern end of the valley keep out the cold north winds. The winds from the ocean are warm, and the Coast Range is not high enough to keep them out. Did you ever get behind a hill or down in a valley on a cold, windy day to get away from the wind? The people in the California Valley are thus protected from the cold north and east winds both winter and summer.

Irrigation in the Valley. The California Valley is one of the finest farming regions in



Visual Education Service

Fig. 537. Barges loaded with wheat being shipped on the Sacramento River



Visual Education Service

Fig. 538. Celery in the flood plains of the San Joaquin River

the world, and fruit is the great crop. The land is rich and nearly level. There is not much rain, but rivers and smaller streams bring water down from the mountains. Farmers on the west side of the Valley raise wheat, barley, and almonds. Oranges, lemons, peaches, pears, grapes, plums, and other fruits grow on the east side. There are fewer streams coming down the mountains on the west side, while on the east side there is plenty of water, which is run out over the land through irrigation ditches. The Coast Range takes some of the moisture that comes from the ocean. The winds then pass across the Valley without dropping much rain.

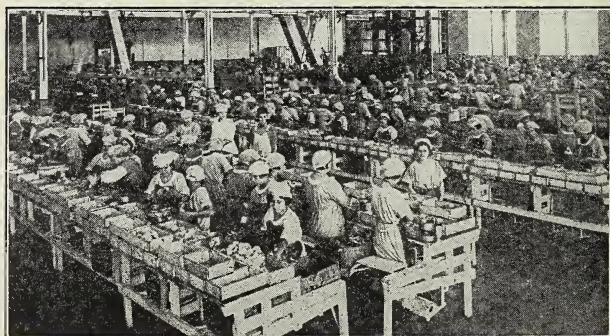
When they strike the tops of the high Sierra Nevada Mountains to the east, snow falls. You remember how Fremont and Kit Carson struggled through snow twenty and thirty feet deep to get into the Sacramento Valley. Look at the map and you will see streams coming down from those mountains. When the snow melts, they are full. That is why dams have been built in the canyons on the sides of the mountains to catch and save the water so

the farmers may irrigate their farms in July and August.

The steel poles and wires running across the country carry electricity from the power houses in the mountains to the cities in the valley and around the bays. As the water runs from the dams on its way to irrigate the fields below, it is used to run the machines that make electricity.

Farming in the Valley. Near Sacramento there are great fields of rice. Sacramento is the capital city of the state, and has many beautiful buildings and parks. The fort that Colonel Sutter built is still in one of Sacramento's parks (Fig. 542). Besides being a shipping center for so many of the products of this region, Sacramento has factories which make use of a great part of the products.

Lodi, the center for growing the Tokay grape, is on the road from Sacramento to Stockton. The country west of Lodi, where the Sacramento and the San Joaquin rivers meet, was once a swamp. Those two rivers brought down rich dirt from the mountains and spread it out over the lowlands, thus making islands and swamps. But all that region has been drained, and dikes have been built to keep out the floods. The soil is as rich as soil can be, and each year thousands of tons of vegetables are raised there and canned (Fig. 539). The canned tomatoes or asparagus tips that you eat may have been grown in this region. Potatoes, onions, and



Visual Education Service

Fig. 539. Canning pears in a Sacramento canning factory

celery (Fig. 538) add to the gold of Stockton which, in the old days, came from the mines.

In the country around Fresno we see grapes, grapes, grapes, in every direction. And from these grapes come our raisins. After the grapes are picked, they are placed on trays and left in the sun for two weeks to dry. The dried grapes are then stored on the trays for another two weeks. Then they are raisins. Because there is no rain in summer, the raisins can cure perfectly. Most of the olives used in the United States are grown in the San Joaquin Valley and in Southern California. Around Bakersfield there is not much farming, for there is little water for irrigation, but there are many oil wells. South of Bakersfield is Imperial Valley, with Indio, a date-growing region, and El Centro, where cotton and vegetables are grown and fields of alfalfa provide feed for the many herds of dairy cows. The Salton Sea, in the northern part of Imperial Valley, is one of the lowest places in the United States. It is below sea-level.

QUESTIONS TO ANSWER

1. Who started growing most of the fruits in this region? 2. What did they have to do before the land could grow crops? 3. Tell the story of the building of the missions. What road was built to connect the missions? 4. How did the padres manage to care for so many Indians? What finally happened to the missions? 5. Did the Spanish noblemen raise fruits or grain and cattle?



U. S. Department of Agriculture

Fig. 541. Fruit orchards in the Southern California Valley



U. S. Department of Agriculture

Fig. 540. Grapes being dried to make raisins

6. How did Americans first trade with California? What were the goods exchanged? What Americans were the first to reach California from the East? 7. How did California become a part of the United States?

8. What city is the center of business for Southern California? What goods are shipped out? What fuel is found even in the city? 9. How did the city get a good harbor? 10. What business is peculiar to one part of Los Angeles? 11. What is one big business in the winter and why? 12. What orchards are found around the Bay of Monterey? 13. What fruit is raised near San Jose?

14. Locate the Valley of California. What mountains on the east and on the west form the rim of that valley basin? 15. Of what value are the mountains to the farmers in the Valley? 16. How did it happen that gold was discovered? Locate the first gold fields. 17. Explain how the miners got the gold. 18. What effect did finding gold have on San Francisco? 19. What is meant by the Golden Gate? 20. What two rivers flow into the ocean at San Francisco? 21. What famous forests are in the mountains north of San Francisco? Why do they grow so big?

22. How does it happen that oranges and lemons can be grown in the Sacramento Valley when



Frederick Photo Service

Fig. 542. Sutter's fort as you can see it today in one of Sacramento's parks.

they cannot in New York which is only a little farther north? 23. What grain is raised in the swampy land near Sacramento? 24. What is now grown on the lowland where the Sacramento and San Joaquin rivers meet? 25. To what city would you go to buy a carload of raisins? How are they made and why can it be done that way?

THINGS TO DO

1. See if you can make a picture of the tree with the bells, the cross, and the priests when they held the first service for the Indians. 2. Make a drawing to show what a mission was like; draw orchards, fields, cattle, and sheep near the buildings. 3. Bring to school labels from boxes, packages, bottles, and cans to show how many of them come from California. Many of them give the name of the city where they were packed. Locate those cities. 4. Bring advertisements of winter resorts of California that you have found in magazines and folders.

5. Make a list of five motion pictures that you know used scenes in or near Los Angeles. 6. Make believe you were one of the gold-hunters who sailed around Cape Horn to San Francisco, and write a letter to your friend in Delaware telling about your trip getting from San Francisco to the gold field and finding gold. Or write about life in San Francisco at the present time.

7. On an outline or sketch map of California locate the Coast Range Mountains, the Sierra Nevadas, the Imperial Valley and Salton Sea, Sacramento and San Joaquin rivers, Mt. Whitney, Mt. Shasta, Mohave Desert, Los Angeles, San Diego, San Francisco, Sacramento, Bakersfield. 8. On an-

other map of the same kind locate oranges, beans, apples, prunes, rice, grapes, raisins, vegetables, redwoods, gold. You can locate some products by turning to the table of cities in the back of the book.

9. On a sketch map of the United States draw arrows to show the direction from which the Spanish came into the United States, the French, the Dutch, the English; locate the Appalachian Mountains, the Rockies, and the Mississippi River; by arrows show the four gateways followed by the pioneers into the Mississippi Valley; by dotted lines show four trails that settlers followed in crossing the Rocky Mountains into the Pacific states.

Books to read: Allen, *United States*, pp. 89-109, 189-212; Carpenter, *New Geographical Reader—North America*, pp. 335-382; *The Food We Eat*, pp. 107-113; Fairbanks, *California*, pp. 21-37, 41-68; Holland, *Historic Adventures*, pp. 187-208; Hubbard, *Citizenship Plays*, pp. 189-222; Jordan and Cather, *Highlights of Geography—North America*, pp. 23-31, 37-42, 109-117, 152-165, 194-214; Lefferts, *Our Own United States*, pp. 258-311; McNeil, *Fighting With Fremont*, entire; *National Geographic Magazine*, April, 1923, January and May, 1924, Sept., 1925; Nida, *Following the Frontier*, pp. 253-273; Pitkin and Hughes, *Farm and Field*, pp. 304-312, *Mill and Factory*, pp. 30-41; Roosevelt and Lodge, *Hero Tales From American History*, pp. 145-154; Southworth and Kramer, *Great Cities of the United States*, pp. 227-244; Sullivan and Logie, *Story of the Spanish Missions of the Southwest*, pp. 1-159; Vollintine, *The Making of America*, pp. 221-232; Woodburn and Moran, *The Makers of America*, pp. 242-248.



Fig. 543. The Grand Teton Mountains, Wyoming, one of our newest national parks

VACATION IN OUR WESTERN NATIONAL PARKS

YELLOWSTONE PARK

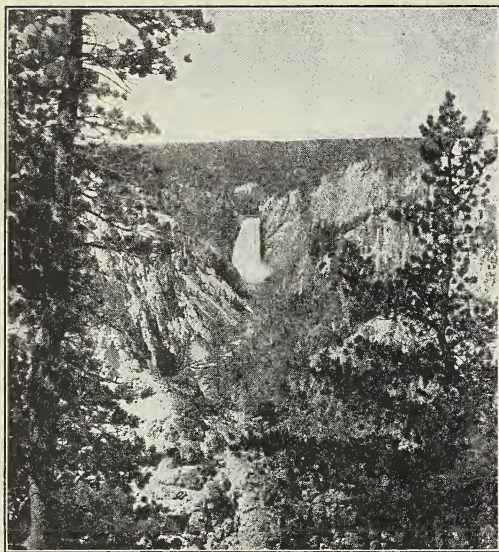
We have finished our book and have traveled from the Atlantic to the Pacific. We have learned about the products of our great country from potatoes in Maine to dates in Arizona, from grapefruit in Florida to salmon in Washington, from peanuts in Virginia to prunes in California. We have traveled on burro and on horseback, in canoe, automobile, Pullman car, and airplane. We have seen the white man settle the country from Jamestown and Plymouth Rock to Seattle and Los Angeles. We have seen our nation grow from a few hundred settlers to the great United States with over 130,000,000 people. We have earned a rest and a playtime. Suppose that we visit our country's playgrounds of the West, the national parks. We will visit first the Yellowstone National Park in Wyoming.

A broad highway leads across the plains over the same route that the pioneers followed to Oregon and California when they drove their ox-teams to the new country. At Cody, Wyoming, founded by Buffalo Bill, we come to the mountains. We look back across the plains and imagine that we can see and hear the millions of buffalo that roamed there in the time of the great hunter and fighter.

From Cody the road leads up and up through deep valleys and in the shadows of high mountains covered with forests of pine and balsam. And now in the midst of this beautiful scene we come to the entrance to Yellowstone Park. The guard gives us directions about park regulations, the roads through the park, and camping places. He tells us that we must leave any guns with him, as hunting is not allowed in the park.

A drive of about thirty miles through beautiful forests and mountains brings us to the outlet of Yellowstone Lake. Here in the public camp grounds we pitch our tent. After supper we join others sitting around a great log fire telling stories. We are up early so that we may enjoy the scenery in the early morning light. The sun bathes in gorgeous color those mountains through which we passed and casts a golden glow over the waters of the lake at our feet. Away to the south tower high peaks which we learn are the Grand Tetons, just outside the park.

Now we are off for a trip down the Yellowstone River. The road runs through the forest and along the quiet river. On the way we pass mud geysers where the mud boils, and bubbles, and spouts. In one the mud is of such bright colors that the geyser is called



James Sawders

Fig. 544. Yellowstone Falls, Yellowstone National Park

The Paint Pot. The river flows smoothly along for several miles. All at once it seems to be in a hurry and begins to jump down over the rocks. There it jumps one hundred feet, rushes along for a half mile, and then tumbles headlong over a cliff twice as high as Niagara Falls. The noonday sun shines down on the white water as it falls into the deep canyon with its red, yellow, and green walls. We drive for twenty miles along the side of the canyon, and catch a glimpse now and then of the roaring river as it rushes, whirls, and dashes from side to side of the narrow canyon. In that part of the park north of the Yellowstone River we see herds of buffalo, deer, mountain sheep, and elk so tame that we can get quite close to them. We are glad that no one is allowed to frighten them by shooting. Here there is also a petrified forest. The trees fell a long time ago and were covered with rock and dirt. As they rotted, dissolved stone took the place of the wood, and now we see stone trees.

Now we visit the famous geyser basin. The guide tells us that the Giantess is about

to erupt, or spout. We see a great pool of water boiling and steaming like a monster teakettle. The ground shakes, groans come from the pool, and then all the water in the pool shoots up and up into the air. We can hardly see the top for the steam. The guide tells us that the stream of water is 150 feet high. Steam floats away on the wind, and great streams of scalding water rush away to Fire Hole River. Near by we see the Old Faithful geyser, which is so named because it erupts faithfully every hour. If we threw a soiled handkerchief into Old Faithful, it would be washed clean and thrown out to us. There are about seventy geysers in the park. Sometimes the hot water from the inside of the earth flows continuously, like any spring. The Mammoth Hot Springs are on the side of a mountain near the northern entrance to the park. As the hot water flows down, some of the dissolved rock in the water hardens and forms a basin. The water flows out of that basin and makes another basin lower down, and so on until the water is cold. The basins are of such beautiful shape and delicate color that we wonder if some artist did not make and paint them.



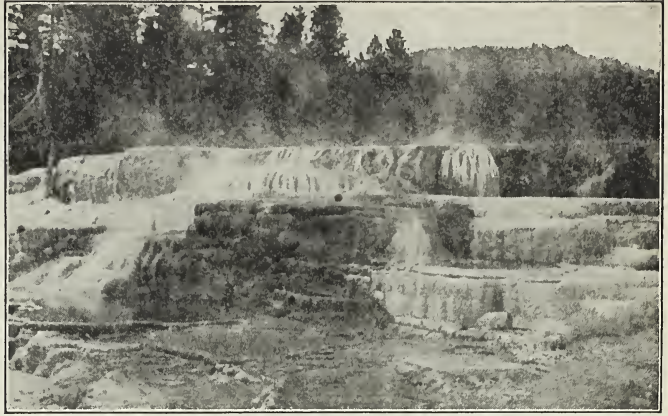
James Sawders

Fig. 545. Old Faithful geyser, Yellowstone Park

The strangest sight of all in the park is the glass mountain and glass road. The glass is not white, but black. It was made when the volcanoes heated the sand so hot that it melted and turned to glass. Glass is melted sand, you know. The road-makers wanted to build the road along the side of the mountain. The glass was in great boulders and humps; so they built big fires to heat the glass. Then they threw cold water on the hot glass, and it cracked into pieces small enough to be moved. To make the road smooth, they melted the glass so that it flowed smoothly just where they wanted it.

GLACIER PARK

We can travel north from Yellowstone Park to Glacier Park over the National Park-to-Park Highway. This highway connects all the parks of the West. The scenery in Glacier Park is different from that in Yellowstone. In Yellowstone the geysers, hot springs, most of the mountains, the petrified forest, and the canyons were made by volcanoes. In Glacier, the mountains were made when the earth cracked and one edge slipped over the other. The mountains are rough and jagged, and most of them covered with snow and ice. That means that there are many glaciers and



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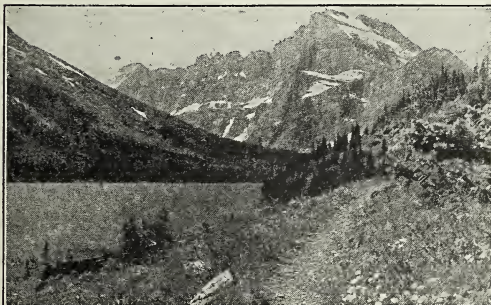
Fig. 546. Mammoth Hot Springs, Yellowstone National Park

lakes. When you visit that park, you will probably not need your bathing suit as the water in the lakes is from the glaciers and so is very cold.

To see Glacier Park you will need stout shoes and strong legs, for the most fun is in hiking and mountain climbing. Of course you may hire a saddle horse and ride over the trails. Keep your eyes open. You may see a black or even a grizzly bear, or a big moose go crashing through the dark green forest. You might see a mountain lion, a deer, an antelope, or mountain sheep scampering over the rocks and snow. You will find Indian names all about: Two Medicine Lake, Going-to-the-Sun Mountain, Red Eagle Lake, and Mount Siyeh. This is the wildest of our parks. You could spend a month here and not see all of it, but you might get lost.

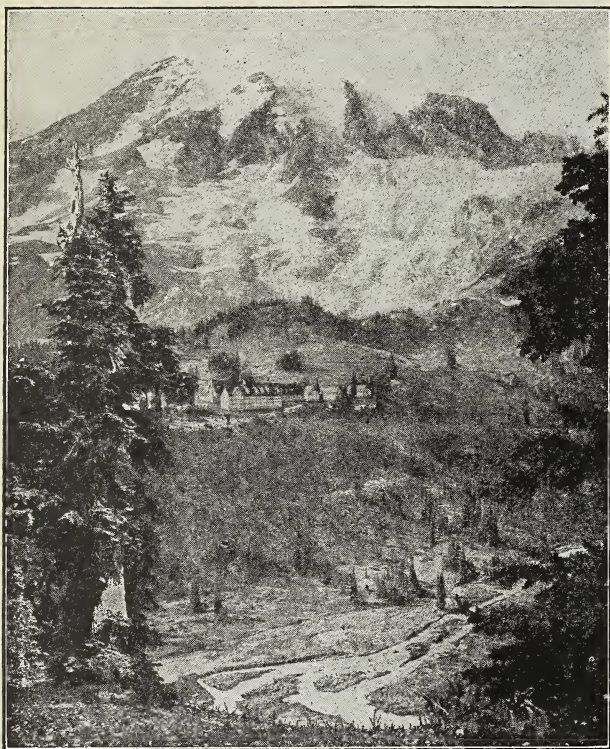
MOUNT RAINIER

There is a highway on which we can travel through Glacier Park, except during the winter months, when the road is closed because of the heavy snows. After we drive through Glacier Park, we have a very good highway through Spokane and west across Washington to Tacoma. To the east of Tacoma we see what looks like a black mountain with a white top. Early in the morning we pile into our



© W. C. Thompson

Fig. 547. St. Mary's Lake, Glacier National Park



Courtesy Southern Pacific Lines

Fig. 548. Paradise Inn, Rainier National Park, Washington

automobile and speed along over a fine highway that runs beside high bluffs and through thick forests. The trees are fir, spruce, hemlock, and cedar. The floor of the forest is carpeted with ferns, mosses, and flowers. In some places the trees grow so close together that the sun can scarcely shine through. The road leads on up the side of the mountain through the dark evergreen forest. We now know why the side of the mountain looked black from Tacoma.

And now the road leads out from the forest. The trees that grow above this point are small, twisted, and knotty fellows. The cold winds of winter howl and tear at them so hard that they must grow close to the ground or not at all. We expected to see snow, but for two miles farther the road passes through a garden of flowers. That flower garden runs

all the way around the mountain, a distance of fifty miles. Of course the garden is not cultivated. It is wild and is crossed by streams and canyons. We try to count the different kinds of flowers we see along the way, but give it up. There are millions of purple asters, dogtooth violets, avalanche lilies, mountain lilies, and patches of shooting stars as thick as the stars in the sky. In one place we see a meadow of yellow flowers only: golden asters, goldenrod, dandelion, buttercups, and golden arnica. Over there is a patch of red, white, and yellow heather. Flowers everywhere. They are growing right up to the edge of the ice and snow.

Our automobile passes close to the side of a glacier. We are soon in Paradise Valley and alight at Paradise Inn. Just above and before us is Nisqually Glacier. We are told that Mount Rainier has nearly forty glaciers, so many that the whole mountain top looks white

from a distance. We might think of Mount Rainier as a white-haired lady with a wreath of bright and beautiful flowers about her neck, and wearing a dark green dress. It is said that a long time ago the whole top of the mountain was blown off, 2000 feet of it. It is still 14,000 feet high. Even though snow covers the mountain-top, there is a crater or hole at the top from which jets of steam may be seen coming out in several places.

THE MOUNTAIN WHOSE HEAD FELL IN

Down in southern Oregon we find another mountain whose top is gone. It is said that a long time ago a hole opened in the side of the mountain near the bottom. The lava flowed out and left the inside of the mountain hollow. Then the top fell into the hole.

Water filled the basin formed when the top fell in, and this water in a crater is now called Crater Lake. The water in the lake is a beautiful blue, and so clear that objects can be seen through fifty feet of it. No stream runs into the lake and none runs out of the top. There must be streams underground. A good automobile road runs around the rim of the crater.



Courtesy Southern Pacific Lines

Fig. 549. Crater Lake, the mountain whose head fell in

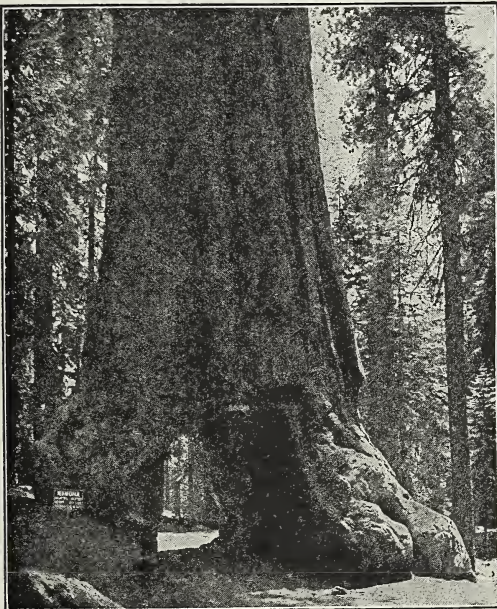
LASSEN PEAK

On our left as we travel south into the Valley of California is Lassen Peak, the only live volcano in our country. Several hundred years ago volcanoes in the park covered the ground with lava and built up two mountains of ashes and lava, Cinder Cone and Lassen Peak. A few years ago the top of Lassen Peak opened up and lava flowed over the edge and destroyed the forests for several miles

down the sides. It is still sputtering and smoking and may break loose again.

SEQUOIA NATIONAL PARK

Would you like to see a tree as thick through as your classroom is wide or long? If the General Sherman tree in the Sequoia Park were hollow, you could place your classroom inside and twenty more on top of it before it would be filled. You would need only the bark for the sides of your queer twenty-story house, for the bark is nearly two feet thick. This tree is one of the oldest living things in the world. It was a baby when the pyramids were built. It was 4000 years old when Columbus discovered America. There are about a million of these trees in Sequoia National Park, California. Of course, some of them are baby trees and others are half grown, but there are many nearly as large as the General Sherman.

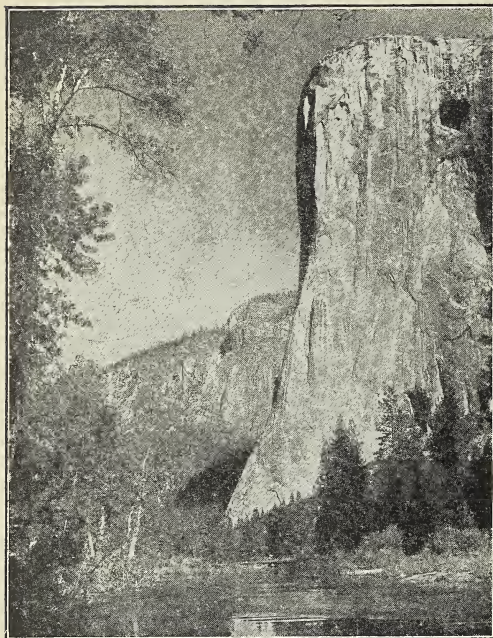


© W. C. Thompson

Fig. 550. This giant sequoia tree is 227 feet high and 26 feet through. The roadway was cut over 50 years ago.

YOSEMITE PARK

A half day's automobile ride from San Francisco brings us to this playground. As our car crosses the hot valley and begins to climb the mountains, we wonder how we shall know when we reach the park. All at once we come to a great gateway a mile wide and a half mile high. On the left towers El Capitan, or The Captain, a mountain of smooth rock. On the right a waterfall so

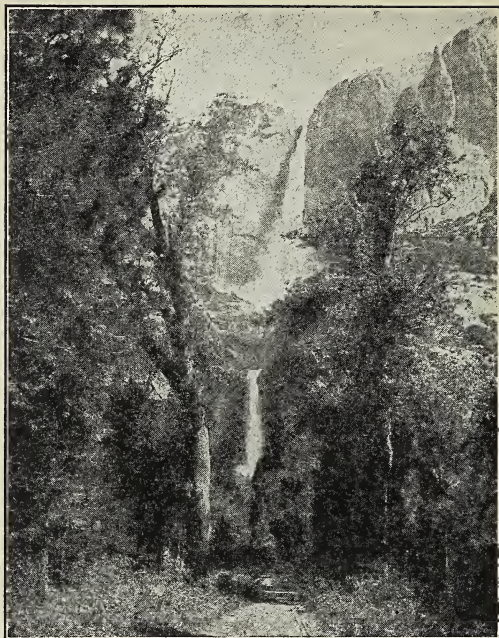


Courtesy Southern Pacific Lines

Fig. 551. El Capitan, Yosemite National Park

fleecy, so white, and so waving that it is called Bridal Veil Falls, dashes from the face of another mountain. We pass through the gateway into Yosemite Valley. Most valleys that you and I have seen have gently sloping sides. We can walk out of them almost anywhere. We can not do that in Yosemite Valley. The sides are almost straight up and down and over a half-mile high. The clear Merced River flows through the park-like level floor of the valley. The mountains that rise up at the sides of the valley have names, such as Cathedral Spires, Three Brothers, Half Dome, and Sentinel Rock.

We go to Yosemite Village near the upper end of the valley. Here are hotels and camp grounds. Near by we enjoy a view of Yosemite Falls, said to be the highest in the world. In two great leaps the water falls a third of a mile. As we watch the water falling from the top like a ribbon, the rainbows play in the mist. Sometimes the rainbow is a circle instead of the half circle that we



Courtesy Southern Pacific Lines

Fig. 552. Yosemite Falls, Yosemite National Park

usually see. Yosemite Valley is beautiful and we should like to stay a month. It would take us a month if we saw all of the sights. The park is as large as the state of Rhode Island. There are many high mountains, waterfalls, lakes, glaciers, and gorges or canyons. The Tuolumne River to the north runs through a deep wild canyon. We can ride or hike over trails to nearly all parts of the park. There are three groves of California's big trees in this park.

THE GRAND CANYON

We leave the main Park-to-Park Highway at Williams, Arizona, to go to the Grand Canyon National Park. We are high up above the sea, but the country is not very rough and is covered with pine and cedar forest. To the right are mountains, but we see no canyons. The automobile stops at El Tovar hotel. We walk just a few feet beyond the hotel, and we are looking at the "biggest beautiful thing in all the world."

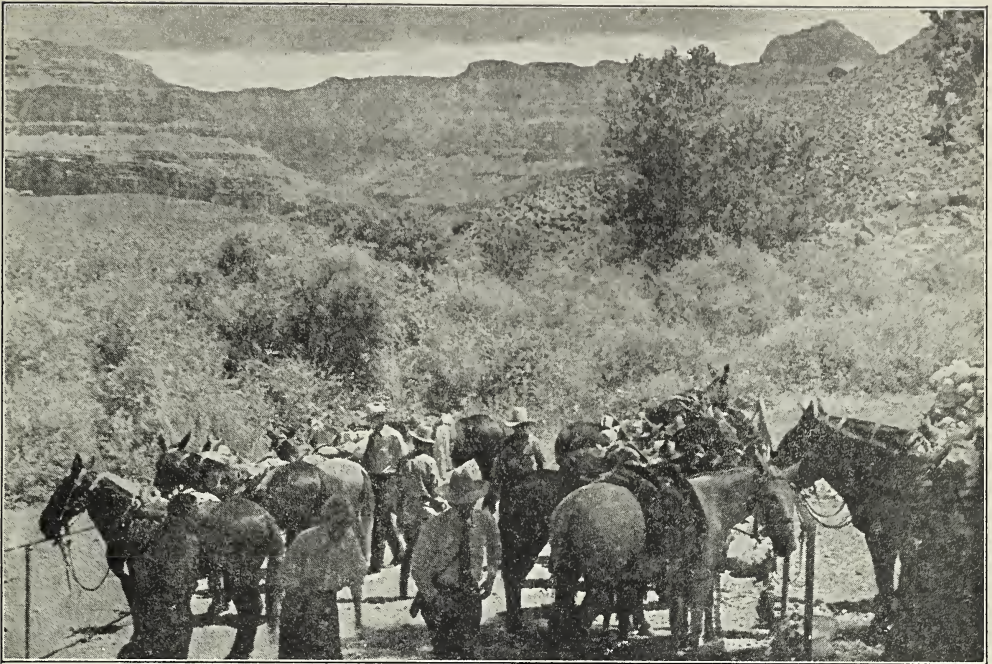


Fig. 553. On the Tonto Rim Trail in the Grand Canyon of the Colorado River

James Sawders

Many people are standing about, but everything seems so still. We expected to see a canyon a few hundred feet across and perhaps 500 feet deep. The other rim of the Grand Canyon is twelve miles away. We can barely see the river far down there in the gorge a mile below us. It seems as though some great giant had torn open the top of the earth so that we might look inside. We look down upon the mountains, temples, pyramids, and palaces that shift and change as the sunlight moves from east to west through the day. The distances and depths are so great that we feel lost.

All the houses and stores, all the buildings in the United States, thrown into the canyon at our feet would not make a roadway for us to cross to the other side. For over 200 miles the Colorado River flows through such a gash. We have seen gray rock in fields, fences, and houses. Here the rocks are streaked and splashed with yellow, white,

gray, orange, brown, blue, green, and shades of red. When the sun shines, it is as though all the rainbows of the world had been tumbled into that one great canyon. We hire a saddle-horse and make a trip down into the canyon. We go down Bright Angel Trail, across a suspension bridge, and up to the other rim. We leave without saying much. The canyon is so big and so beautiful that we cannot find words to tell about it.

While we are in Arizona, we visit the Petrified Forest. Here we find great trees that fell hundreds of years ago and have been turned to stone in the hot, dry air of the Southwest.

North from the Grand Canyon, down in the southwestern part of Utah, we come to Zion National Park. Here again we see deep canyons, cut by the Virgin River. On the sides of the canyons the gorgeously colored rocks have been cut into curious and beautiful shapes by the ever-blowing winds.



Courtesy Denver Tourist Bureau

Fig. 554. Long's Peak and Chasm Lake, Rocky Mountain Park

THE COLORADO PARKS

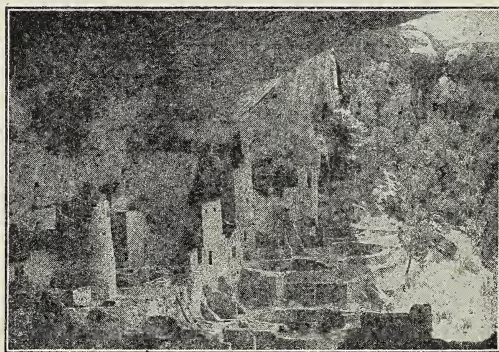
We will now visit Colorado, the most mountainous state. On the way we stop at the Mesa Verde National Park. You know that a mesa is a table-land—land that is raised above the country round about. Well, Mesa Verde is a large table-land. It has been made a National Park because of the homes of the ancient cliff dwellers found there. We begin to climb up and up past San Isabel National Forest and South Park. These parks are fertile valleys covered with rich grass and trees as though men had laid them out for parks. There are four large ones in the state: San Louis, South, Middle, and North parks. All of them are high up among the mountains.

At Salida we come to the Arkansas River.

We follow that river through or along its wonderful gorge. At one place the gorge is so narrow that the railroad has built a bridge lengthwise of the river. At the bottom there is not room for the tracks. At Colorado Springs we turn aside to climb Pike's Peak. We may drive up in our automobile. At the top we may snowball our friends even in July. From the top of Pike's Peak we can see for miles eastward across the Great Plains. To the west and north we see mountains, and still more mountains.

The city of Denver has a mountain park all its own, of peaks and gorges, and plateaus. Colorado has many mountain peaks, so many that we can hardly count them. It is said there are nearly 300 peaks over 13,000 feet high, and almost fifty peaks over 14,000 feet high. How many miles higher than New Orleans, which is at sea level, would one of these mountain peaks be?

Northwest of Denver is Rocky Mountain National Park, with its beautiful Long's Peak and Chasm Lake (Fig. 554).



Courtesy Denver Tourist Bureau

Fig. 555. Ruins of the homes of the ancient cliff dwellers in Mesa Verde National Park, Colorado

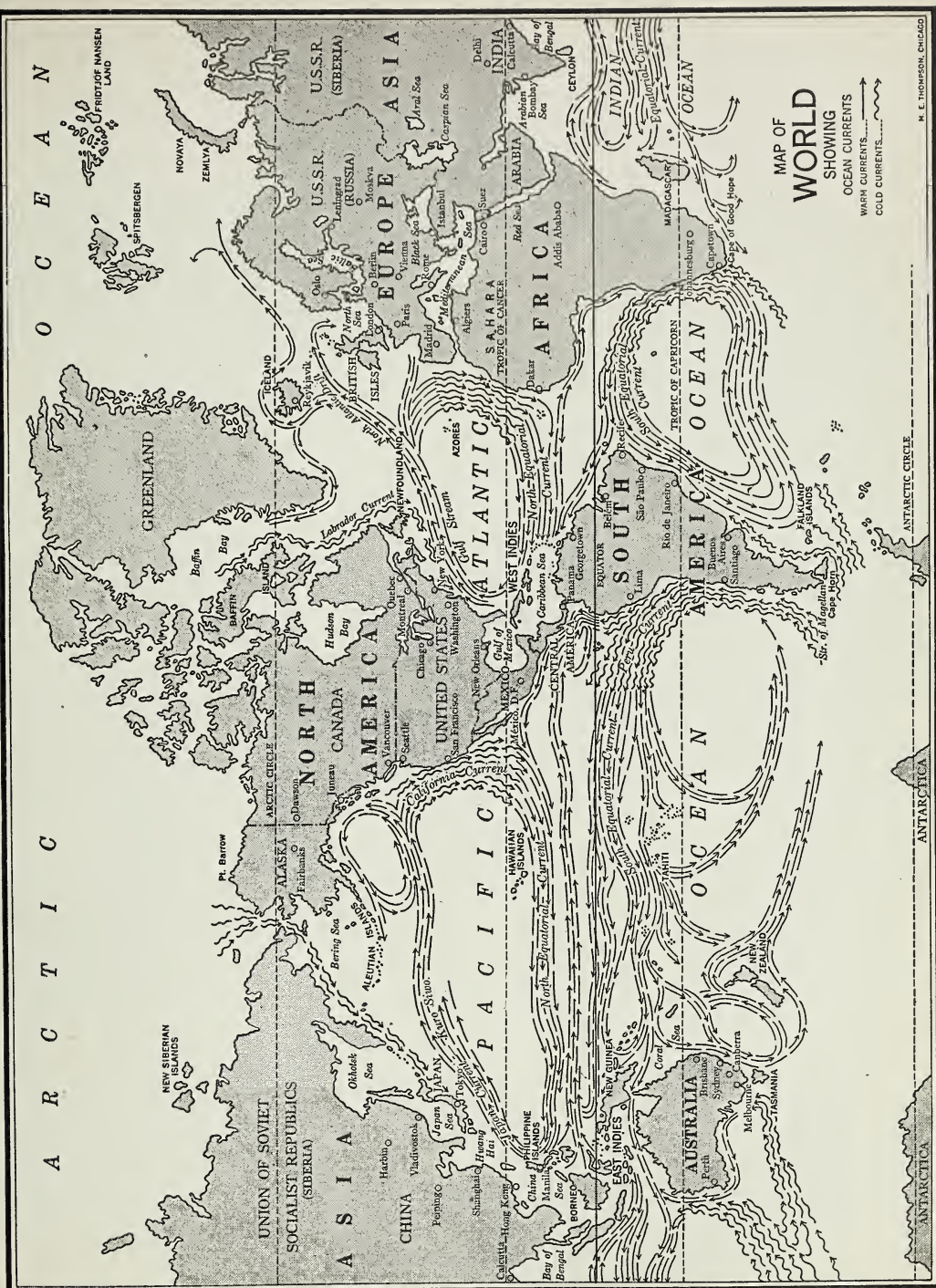


Fig. 556. Map of the World.

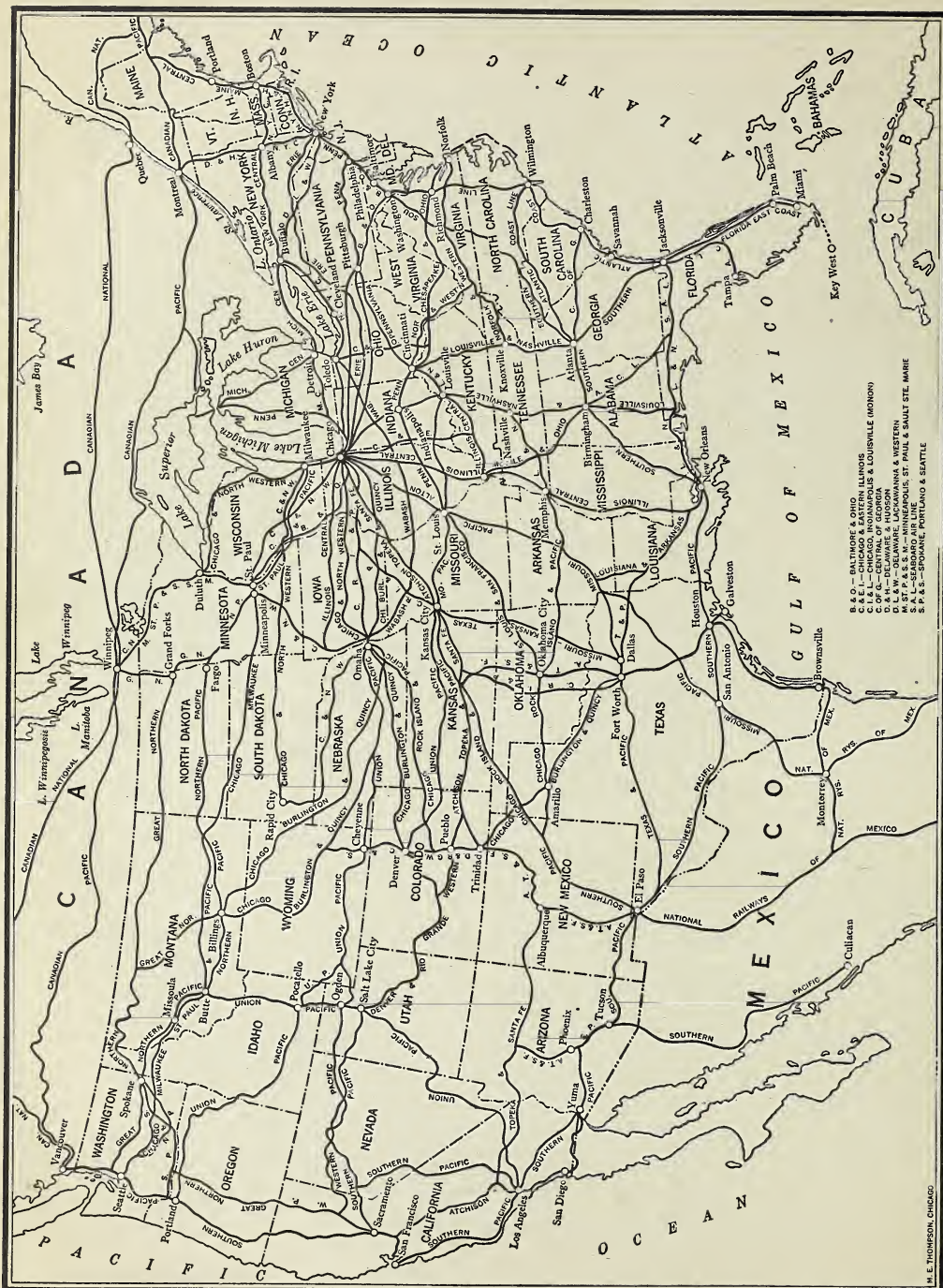


Fig. 557. Map of the railroads of the United States



James Sawders

Fig. 558. In the Caribbean Sea and in the Pacific Ocean are many small islands which belong to the United States. Although they are widely scattered, many of the islands are alike in several ways. Most of them have a mild climate with plenty of rain. And many of them grow fruit on plantations like the one you see in this picture. This plantation is on one of the Hawaiian Islands.

OUR TERRITORIAL POSSESSIONS

LANDS OUTSIDE THE STATES

The location and size of our possessions. The United States has lands beyond the borders of the states. European countries call such lands colonies. We generally speak of them as possessions or territories. Among our possessions are the Hawaiian Islands, three of the Virgin Islands, the Canal Zone, the islands of Puerto Rico, Guam, Midway, Wake, Canton, and Enderbury, and the large peninsula of Alaska.

Alaska is the largest of our territories. It fills the northwest corner of our continent. There are more than half a million square miles of land in Alaska. It is about one-fifth the size of the United States. Find it on the map on page 394.

There are twenty of the Hawaiian Islands, but only nine of them are inhabited. If they were put together, they would be only a little larger than our state of Connecticut. They lie in the Pacific Ocean two thousand miles away from the western edge of our continent. Find them on the map on page 384.

Guam, Wake, Midway, Canton, and Enderbury are also in the Pacific Ocean. They are tiny little islands.

Puerto Rico is among the islands of the West Indies. You have read that these islands were called Indies because Columbus thought he had found a part of India. Later they were called West Indies when people discovered that they were not part of the

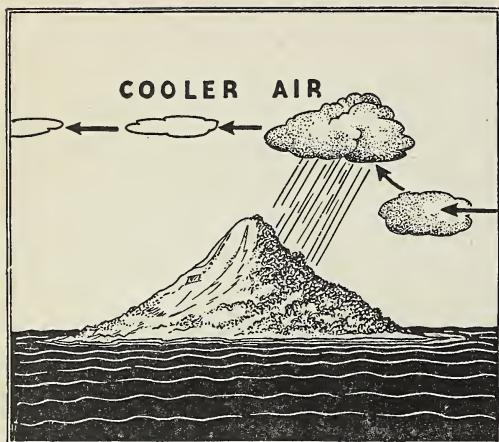


Fig. 559. This diagram helps to explain the climate of mountainous tropical islands. The winds usually blow steadily from the same direction. The rain clouds are carried upward where the air is cooler. Then rain falls as shown in the diagram. By the time the clouds have crossed the mountains, they have lost most of their rain. Look at the other diagram on this page.

East Indies, thousands of miles away in another ocean. Puerto Rico belongs to a group which is called the Greater Antilles. The island is smaller than the state of Connecticut. Find it on the map on page 414.

Near Puerto Rico are the Virgin Islands. Three of them belong to the United States. Find them on the map on page 414.

The climate of our tropical possessions. All of these territories, except Alaska, are in the part of the world which we call the Tropics.

Tropical islands are warm every day in the year. The thermometer usually reads between 74° and 80° in the islands of the tropics. The islands are not so hot as tropical lands that are far from the ocean. Breezes from the ocean help to keep them cool. We say that they have a marine climate, which means a climate that is warm and damp.

In most parts of our country we are used to winds that come from different directions. Sometimes the wind is strong, and at other times there is scarcely a breeze. But if you went to the tropics to live, you would soon

discover that the wind seems to blow steadily all the time.

Those winds that reach the tropical islands are the trade winds. They are the same Northeast "Trades" that helped the ships of Columbus when he set sail from Spain. South of the equator the trade winds come from the southeast. Sweeping across miles and miles of ocean, these trade winds are wet by the time they reach the islands.

When the wet trade winds reach the islands, the clouds that are carried along must rise, because there are mountains on most of the islands. Look at the diagram at the top of this page and see what happens. You can see that if the islands have mountains, then the islands receive rain and are fertile.

Many of the islands are really just the tops of old mountains that rise above the surface of the ocean. Many of them are volcanoes.

Look at the other diagram on this page. Notice that one side of the island usually receives most of the rain. That is the side toward the wind. And so the slopes that face toward the north and northeast have forests, thick shrubbery, and tangled vines. The sun-

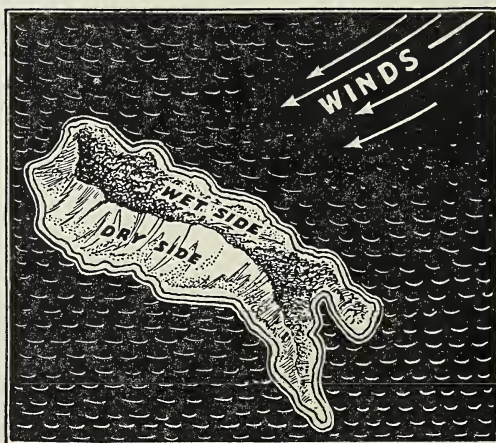


Fig. 560. This diagram shows that many tropical islands have a wet side and a dry side. It is easy to see that the side toward the wind, or windward side as it is called, receives the most rain. The side away from the wind, or leeward side, is the dry side.



Acme Newspictures, Inc.

Fig. 561. Most of the tropical islands are mountainous like the one in this picture. In some of the islands the mountain slopes are bare, but in many of them the slopes are covered with trees or shrubs.

shine, heat, and rain make the fertile soil produce generously.

The southern slopes of the island mountains are not so fertile. The trees and shrubs are kinds that will stand dry weather. Often there is cactus, live-oak, sisal, and other plants that do not need much rain.

The uninhabited tropical islands have fertile north slopes and dry south slopes today, and we know that almost all the islands were like that when Columbus first saw them. But the white men have been able to make many changes during the three hundred years and more that they have been on the islands.

PUERTO RICO

Puerto Rico's history. Suppose we sail south from New York and visit the only United States possession that Columbus discovered. It is one of the large islands on the edge of the tropics. Our ship will anchor in the harbor of San Juan on the north coast.

Columbus named this island San Juan Bautista, which is Spanish for St. John the Baptist. You have read about Ponce de Leon, who sailed with Columbus on his second voyage. De Leon called the bay on the north coast Puerto Rico, meaning Rich Port. Soon the island took that name, and only the city and harbor kept the name that Columbus had given to the island.

The Spaniards found gold in the streams of Puerto Rico and forced the friendly Indians to work for them in the mines. Thousands of the natives died and many others escaped. At last the Spaniards brought Negro slaves from Africa to do their work. By that time the Spaniards had found that the island was a good place to grow sugar-cane.

For centuries Puerto Rico belonged to Spain. The Spaniards erected two stone forts to guard the entrance to the bay of San Juan. These forts protected the city from pirates and from the English "sea dogs," such as

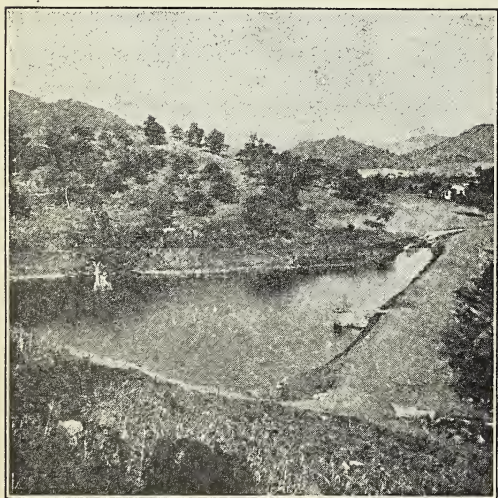
Sir Francis Drake. Spain had to struggle to keep her island possessions in this region, which was called the Spanish Main.

Spain held Puerto Rico until the close of the war with the United States in 1898. Then the island came to us by treaty.

That little bit of history explains several things about Puerto Rico. It tells you why most of the people speak Spanish, although they are citizens of the United States. Only about half the children are able to go to school. The grade schools in the country are usually taught in Spanish, although the high schools use English.

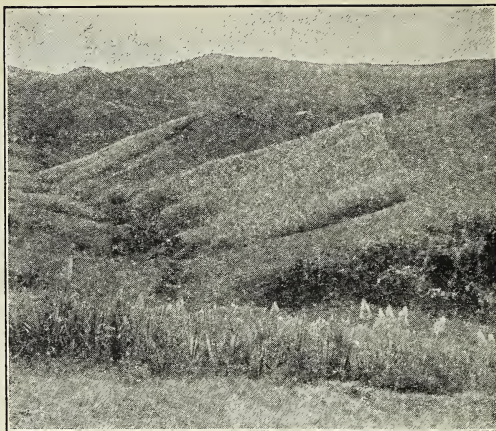
This history explains why three-fourths of the million and a half people in Puerto Rico are of Spanish blood and the other fourth of Negro blood.

What Puerto Rico is like. Perhaps the best way to describe Puerto Rico is the way Columbus described the island. When Queen Isabella asked him what the island was like, he crumpled up a piece of paper and threw it on the table. Puerto Rico is a crumpled-up piece of land lying in the sea. It is full of mountains and valleys.



Ewing Galloway

Fig. 562. This reservoir on a hillside in Puerto Rico supplies water to a sugar-cane mill.



De Cou from Ewing Galloway

Fig. 563. The hillsides of this plantation in Puerto Rico are covered with sugar-cane in bloom. You can see some of the great tassels. After the cane is cut, new canes grow from the old roots. But in a few years the old roots do not produce well, and so new fields have to be planted. When the cane is cut from old fields, the upper part of the stalk is used to plant new fields. Short pieces of the stalk are laid in shallow trenches dug in the hillside.

As you travel across Puerto Rico, you see many groves. There are palms, cedars, ebony, and bamboo. When you reach the higher slopes of the mountains, you notice that some of the groves have become forests. But not all the mountains are covered with trees. There are bare places where all the trees have been cut down for firewood.

The people of Puerto Rico do not have coal. Instead they use charcoal. For many years they have been making charcoal, without replanting the trees they cut down. But now they are beginning to plant trees.

Coffee plantations and gardens. In the little mountain valleys are hundreds of small coffee plantations. Many of the natives who own these plantations are quite prosperous. They all have little vegetable and fruit gardens in which they can raise enough food for themselves and their families. The coffee crop gives them money for clothing and other things.

In the gardens you will find sweet potatoes, corn, bananas, and sometimes cocoanuts.

There will also be plantains, which are a kind of banana. The plantain is larger than the ordinary banana, and is much starchier but not so sweet. There will also be *manioc*, or cassava, as it is sometimes called. The people eat the manioc or cassava root much as we eat potatoes.

Tobacco plantations. Further down the slopes, in the central part of the island, are two valleys where tobacco is grown. During November and December the tobacco plantations are a strange sight. You would see whole fields covered with white cheesecloth. At that time the sun's rays are so hot that they would damage the growing tobacco. The cloth covering protects the plants. The tobacco grown in Puerto Rico is a fine grade and is the second most important crop of the island.

The important sugar crop. The most important crop is sugar. Today sugar makes up half of the exports of the island.

Most of the sugar-cane plantations are on the lowland plains close to the ocean. Some are found in the valleys and sloping plains higher in the mountains. Many of the largest sugar-cane plantations are owned by American companies and managed by Americans.

The laborers on a cane plantation earn from fifty cents to a dollar and a half a day.



Burton Holmes from Ewing Galloway

Fig. 565. Many of the natives who work in the sugar-cane fields live in huts like these, built of poles and grasses at the edge of the fields.

They are poor because they work only about six months in the year. As they do not own any land, they cannot raise their food as do the coffee-planters.

Fruit plantations. On the rolling plains of the north central coast there are some immense fruit plantations. The soil and the climate are just right for growing pineapples, oranges, grapefruit, and lemons. The large fruit plantations are also owned by American companies. Many of the companies also have their own fruit canneries. The plantations and canneries are close to the port at San Juan so that the fresh and canned fruits can be loaded quickly for shipment to the United States and other countries.

The need for more industries. There are not many places for Puerto Ricans to work outside of farms. The sugar mills and canneries employ workers, and there are factories that manufacture cigars and cigarettes. At the coffee plantations a few people find work cleaning and preparing the coffee. The people need more factories to provide work for all the population.

Puerto Rico is noted for fine embroidered linens. Men, called operators, import plain



Ewing Galloway

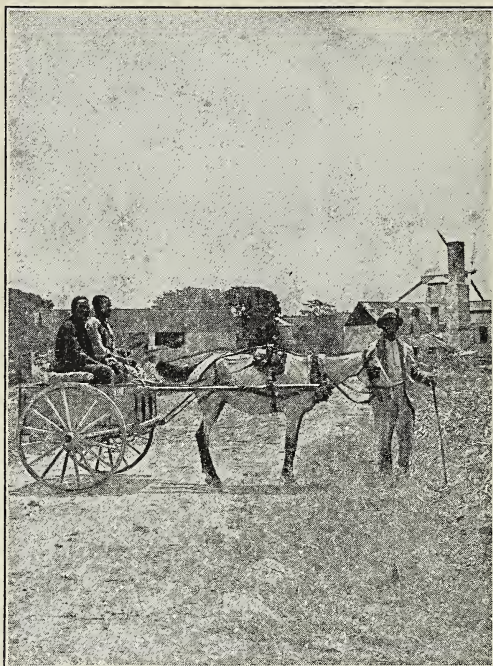
Fig. 564. These workmen are cutting sugar-cane. The leaves are stripped from the heavy stalks, and only the stalks are sent to the mill. Notice how tall the cane grows and how thick the stalks are.

linen from the United States. They pass out this linen to women in the villages and on farms in the coffee district. The women embroider the linen and do other needlework for only a few cents a day. The operators then sell the embroidered linen.

Straw hats are made in homes and in little village factories. The business is managed in much the same way as the embroidery business.

The chief cities of Puerto Rico are connected by railroads and by telephone and telegraph lines. In the interior of the island the roads are poor, and most transportation is by donkey-back or in wagons drawn by mules or oxen. There are not many automobiles, except in the cities, because the natives are too poor to buy them.

Crowded Puerto Rico. Puerto Rico is crowded compared with the whole United States. More than a million and a half peo-



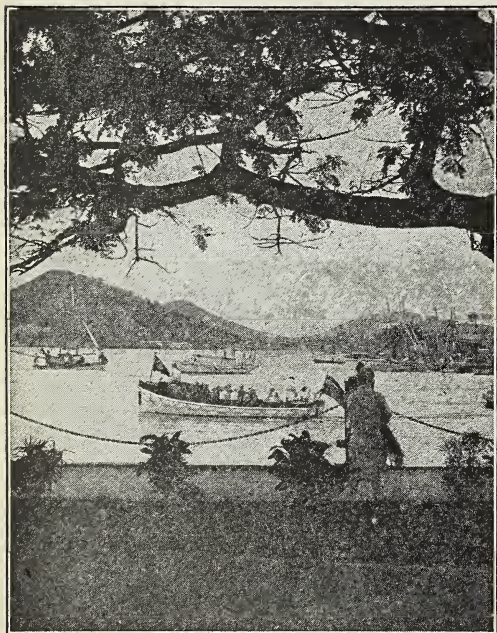
James Sawders

Fig. 567. The building in the background is a small sugar mill on the island of St. John, one of the Virgin Islands. These islands do not have the large plantations or great mills such as are found in Puerto Rico and other tropical islands.

ple live in a region smaller than our state of Connecticut. And almost three-fourths of them must earn their living on farms. If the population keeps getting larger, industries must be established to give the people work.

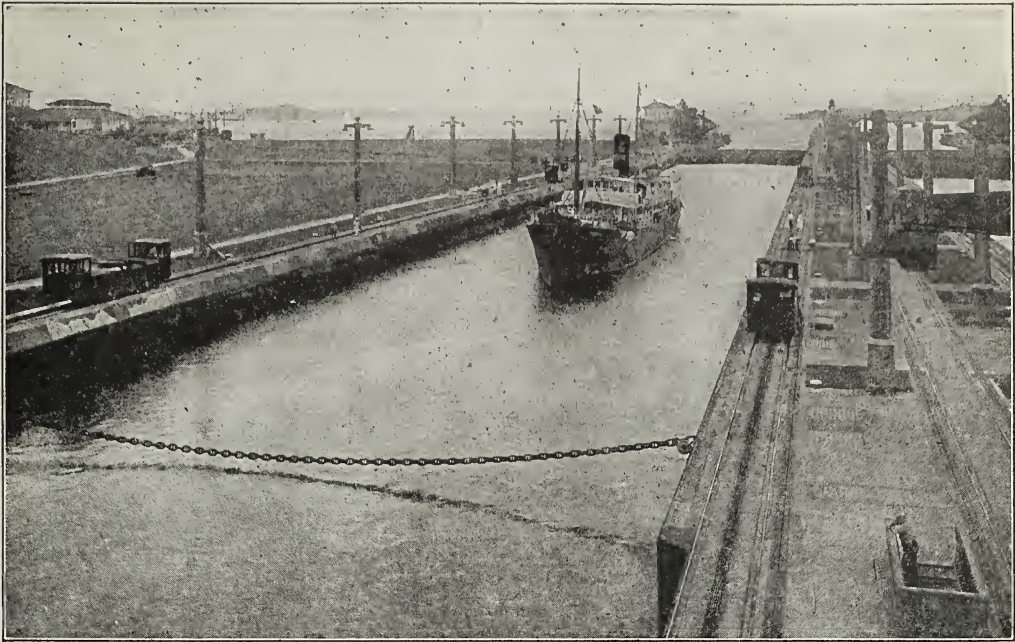
THE VIRGIN ISLANDS

Life in the islands. Our possessions in the Virgin Islands, just east of Puerto Rico, consist of St. Thomas, St. Croix, and St. John. The people on these islands live in much the same way as do those on Puerto Rico. There are almost no industries in the Virgin Islands. On St. Thomas the people manufacture bay rum. The harbor of St. Thomas was once a port for pirates. Today some of the liners running between North and South America stop there. So do many vessels from England that are bound for the Panama Canal.



James Sawders

Fig. 566. From the harbor at Charlotte Amalie, in the Virgin Islands, you can see the mountains. Most of the islands are mountaintops rising from the sea.



Paul's Photos

Fig. 568. This steamer has just entered the Gatun lock of the Panama Canal. When the gates of the lock are closed, the water is let out, which lowers the ship. On the next page is a picture of a ship leaving a lock.

THE CANAL ZONE

A famous region. To reach our other possessions, we must sail toward the Pacific Ocean. As our ship goes through the Panama Canal we are again in a United States possession.

This part of the world has been famous since the days of Balboa, who crossed the narrow neck of land and saw the Pacific Ocean. Later the Spaniards built the "Gold Road" across the isthmus. Runners carried gold shipped from the mines of Peru across the isthmus to ships that carried the treasure to Spain. The only other way would have been to sail all the way around South America.

More than fifty years ago the French started to build a canal across the isthmus. They had built the Suez Canal from the Mediterranean to the Red Sea and knew how much time a canal here would save ships. They thought that a canal through this isth-

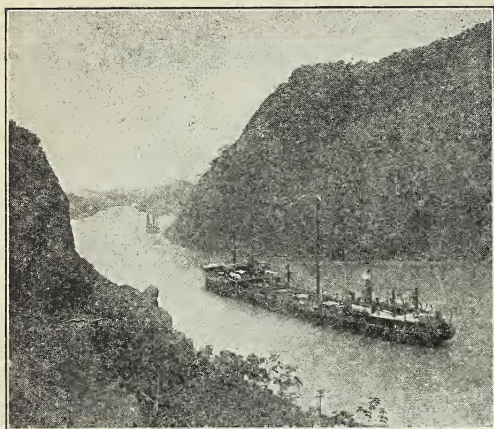
mus would be very profitable. But the French failed, because their workmen died of yellow fever.

The building of the canal. In 1903 a strip of land ten miles wide across the isthmus was turned over to the United States by the Republic of Panama. The story of how the great canal was built on this strip of land is a thrilling one. You should read the stories of Colonel Gorgas and General Goethals, who had charge of this difficult undertaking. It took ten years to build the canal, and the cost was nearly four hundred million dollars.

The Canal Zone, as it is called, is guarded by great forts, because the United States must protect the canal in time of war.

QUESTIONS TO ANSWER

1. Why are most of the inhabitants of Puerto Rico Spanish, and the rest Negroes? What happened to the Indians who were living on the island when Columbus landed?
2. Read an encyclopedia article on



Ewing Galloway

Fig. 569. Part of the Panama Canal is like a river cut through a mountain. In this picture you see a freight steamer passing through the Gaillard Cut. Farther ahead you can see a dredge at work. Dredges must be used all the time in some parts of the canal, as landslides from the mountains frequently occur. Then the dredges have to make the channel clear and deep enough for ocean vessels.

the Panama Canal. What were some of the reasons why it was difficult to build the Panama Canal? Why did the United States succeed in building it after France had failed? 3. We bought our possessions in the Virgin Islands from Denmark. Why are the islands in that group that we own important to us?

THINGS TO DO

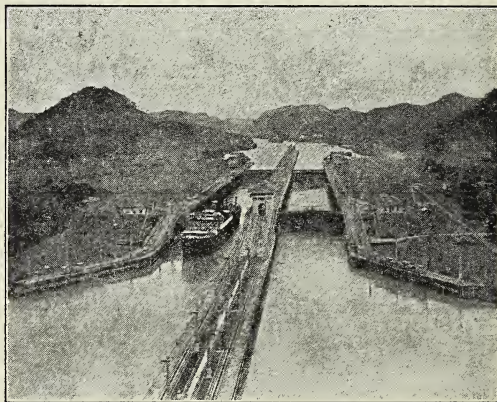
1. Make reports before the class on Ponce de Leon's voyages to Puerto Rico and Balboa's discovery of the Pacific Ocean. There is a short account of these explorers earlier in the text, but you can find a more complete story of their explorations in history books at the library. 2. Place an exhibit of pictures of Puerto Rico and the Virgin Islands on the bulletin-board in your classroom. You can probably find some pictures in advertising folders that you can get from steamship lines whose boats stop at the islands. Point out in these pictures the things you would probably find on any tropical island.

3. Have you ever eaten plantains? If you live in a region where you can buy plantains, bring one to school. 4. Plan an exhibit of Puerto Rican products. You may not be able to tell whether the sugar and coffee your mother buys come from Puerto Rico, but you could include these articles in the exhibit, as

they are important products of the island. You might be able to find some Puerto Rican tobacco or a cocoa-nut from the island. If you can find a straw hat that was made in Puerto Rico or a piece of linen that was embroidered there, bring them for the exhibit.

5. Bring to class some pictures of the Panama Canal. If possible, find some which show ships going through the locks and be able to explain briefly how the locks work. 6. If you were to leave your present home and go to live in Puerto Rico, you would find life different in many ways from what it is in the United States. You might like some things about life there and dislike others. Write a story pointing out what some of the differences would be. You can find out something about how children live in Puerto Rico in *Our Little Puerto Rican Cousin*, or on pages 12-23 of *New Little Americans*. Both of these books are by Mary H. Wade.

7. Write a brief account of the Panama Canal, telling its history and reasons for its usefulness. You can find helpful material on the Canal in *The World Book* or *Compton's Pictured Encyclopedia*. Some books you will like to read on this subject are *New Little Americans*, by Mary H. Wade, pages 203-238, and *Our Little Panama Cousin*, by H. Lee M. Pike.



Ewing Galloway

Fig. 570. This vessel is leaving the Pedro Miguel locks of the Panama Canal on the way to the Pacific Ocean. The locks of the canal are built in pairs. Electric towing engines run on tracks beside the locks and pull the vessels through. The water in the background of the picture is at a higher level than the water in the locks. If another vessel goes through the lock in the same direction, the gates must be closed and the lock filled with water from the upper level.



James Sawders

Fig. 571. The mountain you see across the bay is called Diamond Head. It is on the island of Oahu.

THE HAWAIIAN ISLANDS

The story of the islands. Two thousand miles away from the United States are the Hawaiian Islands. A great mixture of peoples live there. Only ten per cent of the population is white. Suppose we see how these islands came to be inhabited and how they became a United States possession.

About the year 500 some natives from the Samoan Islands arrived in Hawaii. A few years later other natives from the island of Tahiti came. These people from the southern islands of the Pacific found that it was easy to make a living on most of the Hawaiian Islands. More people came, and the population increased. But the people were constantly at war with each other. At last one of the chiefs, Kamehameha, became more

powerful than the other chiefs and made himself king. His descendants ruled until there was a revolution in 1893.

White men had occasionally visited the islands, but an English captain named James Cook was the first to write about them. He described the islands as he saw them on his voyage in 1778. He called them the Sandwich Islands, after his friend the Earl of Sandwich. Next year Captain Cook was killed by natives.

Portuguese sailors from trading vessels stopped in the islands. Fishermen from Japan came there and settled. Chinese, Koreans, Filipinos, and Puerto Ricans also came. Missionaries came from the United States and preached Christianity to the people.

After the revolution in 1893, the leaders of the Hawaiian people asked the United

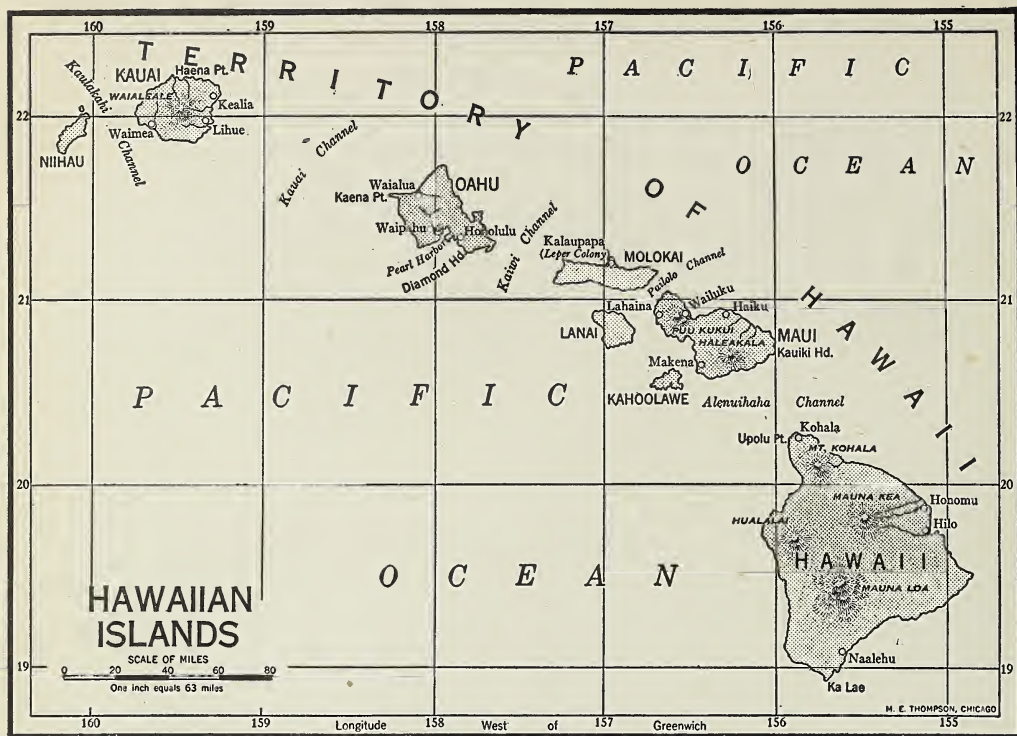


Fig. 572. The map on page 387 shows you the neighbors of the Hawaiians. If you turn to the map on page 373, and find the Hawaiian Islands, you will get a better idea of how far from Asia and America these islands are. The map on page 373 also shows a warm ocean current which affects the islands' climate.

States to take charge. Finally the islands were made a possession of our country. We call them the Territory of Hawaii. In spite of the mixture of peoples, the natives are good citizens of the United States. The schools are taught in English, and the University of Hawaii at Honolulu is a large one.

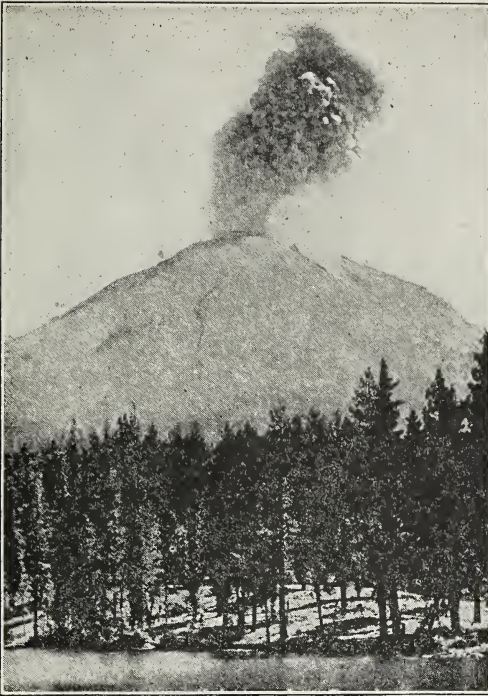
The islands and their people. The Hawaiian Islands are the tops of volcanoes that rise from the sea. Some of the volcanoes are "dead," but others are still alive. Much of the soil is made of cinders and ashes from the volcanoes. In most places it is rich and fertile. As you would expect, the islands are rough and mountainous. But there are beautiful valleys with many swift streams.

The people of Hawaii are mostly farmers. Besides sugar plantations and pineapple fields,

there are rice plantations. White men have discovered that the upper slopes of the mountains are good places to raise cattle, horses, hogs, and sheep. A little coffee is raised and some tobacco. Some of the people fish in the ocean for a living.

Most of the large plantations are owned by white people who live in the islands. But the natives have gardens and raise a great deal of food. They grow a root called *taro*, that is somewhat like a turnip. The root is baked, pounded until it is like meal, and then mixed with water into a kind of paste. The natives eat this starchy paste, which is called *poi*. The root of another plant, *ti*, also is eaten.

Rice is an important food in Hawaii, especially among the Japanese, who make up almost half of the population.



Paul's Photos

Fig. 573. Mauna Loa, an active volcano, is only forty miles from the city of Hilo.

The capital city. Honolulu, the capital of the islands, is the chief port. Find it on the map on page 384. It is located on the island of Oahu. Oahu is not the largest island, but it has the largest population and the most wealth.

Honolulu is a clean, attractive city, with a busy district along its waterfront. Beyond the city lie fields of sugar-cane, pineapple, and sisal. Rope and twine are made from the fiber of sisal plants.

Places of interest. Everyone has heard of Pearl Harbor, on Oahu, a great naval base for the United States fleet. Near by is an airport, where in normal times clipper ships of the air take off for Asia and America.

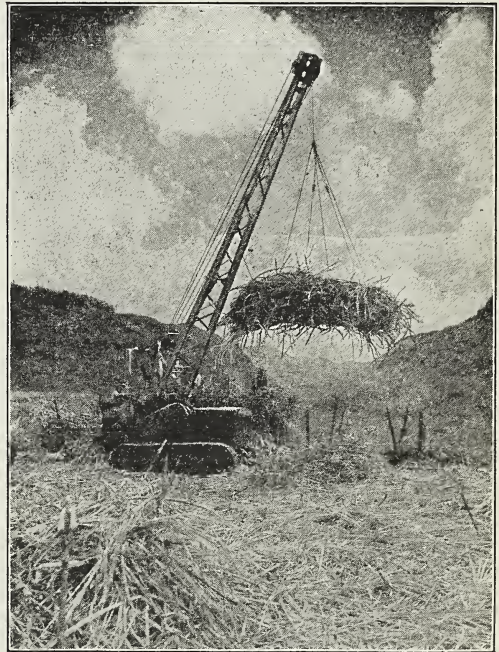
On the way to the island of Hawaii, the largest of the group, you will pass the island of Molokai, where Father Damien took care of the lepers who live there.

Hilo is the port of Hawaii and its largest city. Visitors almost always go to see the three great volcanoes of this island. One of them, Mauna Loa, is one of the largest volcanoes in the world.

The Territory of Hawaii is a prosperous group of islands. Their chief trade is with the United States. Large cargoes of sugar are sent to our country to be refined, and we buy most of the Hawaiian canned pineapple and fish. But most of the people who live in the United States think of Hawaii as the place where we get our pineapple and where we would like to go for a vacation.

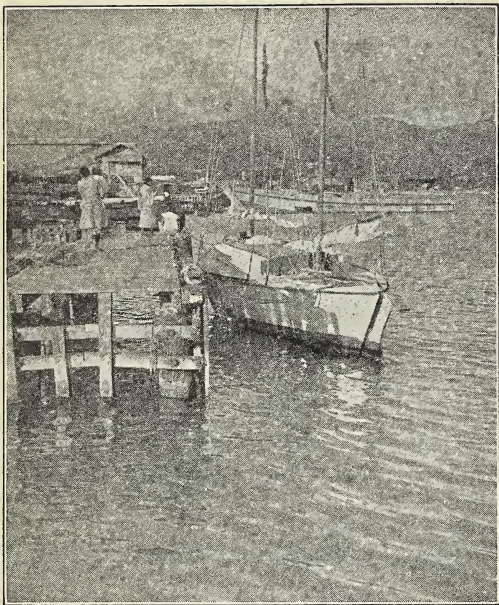
QUESTIONS TO ANSWER

1. What various peoples are there in the Hawaiian Islands? Study a map showing the location of the islands. Explain from the map just why such a mixture of peoples happened to settle in Hawaii.
2. Why do you suppose the Hawaiian Islands are



Paul's Photos

Fig. 574. Many of the large sugar plantations of Hawaii use modern machinery to handle the cane. This crane is loading bundles of sugar-cane on small railway cars that run between field and mill.



James Sawders

Fig. 575. There are many small fishing boats in the harbors of the Hawaiian Islands. The islanders eat a great deal of fish.

important possessions of the United States? Write down your reasons.

THINGS TO DO

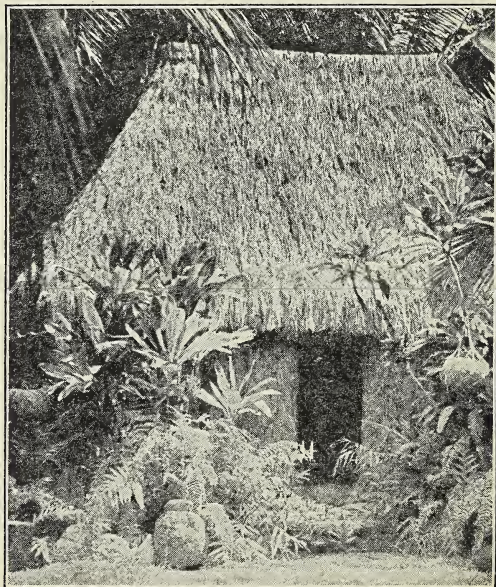
1. You can have a very interesting exhibit of pictures showing the beautiful scenery of the Hawaiian Islands. You might hunt for pictures in newspapers, magazines, and in travel folders put out by steamship and airplane lines. Find pictures showing the mountains and farming districts of the islands, the two volcanoes (Mauna Loa and Kilauea), Honolulu and Pearl Harbor, Waikiki Beach, and native villages. 2. As a separate exhibit, you can make a collection of pictures showing the chief industries of the Hawaiian Islands. Be sure to include pictures of rice-fields, of sugar-cane plantations, of pineapple-fields, and of the natives fishing.

3. As you read in the text, Captain James Cook was the first white man who told the outside world much about the Hawaiian Islands. He had many exciting adventures, and you would enjoy reading more about him. One or two of you might make reports on his life to the class. 4. Make a report on Father Damien. The librarian of the school or pub-

lic library will help you find material on his life. You will find that he was a very interesting person.

5. Do you have a phonograph in your school? If so, try to find some records of Hawaiian music. Play them during some class period and notice the odd effect of the native instruments. 6. Some of the Hawaiian names in this section are very hard to say. This is a good chance for you to practice using the dictionary as a help in pronouncing words. Make a list of the difficult words, look them up, and practice saying them. Bring your lists to class and compare them.

7. In undisturbed times you would find Hawaii a pleasant place to visit. You might even want to live there. What do you think the most attractive things about life in Hawaii would be? What are some of the strange foods and customs you would find there? Read some books about the Hawaiian Islands and then write a story telling why you would, or would not, like to live there. Some books you will find very interesting are *Our Little Hawaiian Cousin*, by Mary H. Wade, and *A Little Journey to Hawaii and the Philippines*, by Marian M. George. "Hawaii, the Beautiful Land," pages 23-61 of *New Little Americans*, by Mary H. Wade, will give you more information on these islands.



Paul's Photos

Fig. 576. Hawaiians used to live in huts like this.

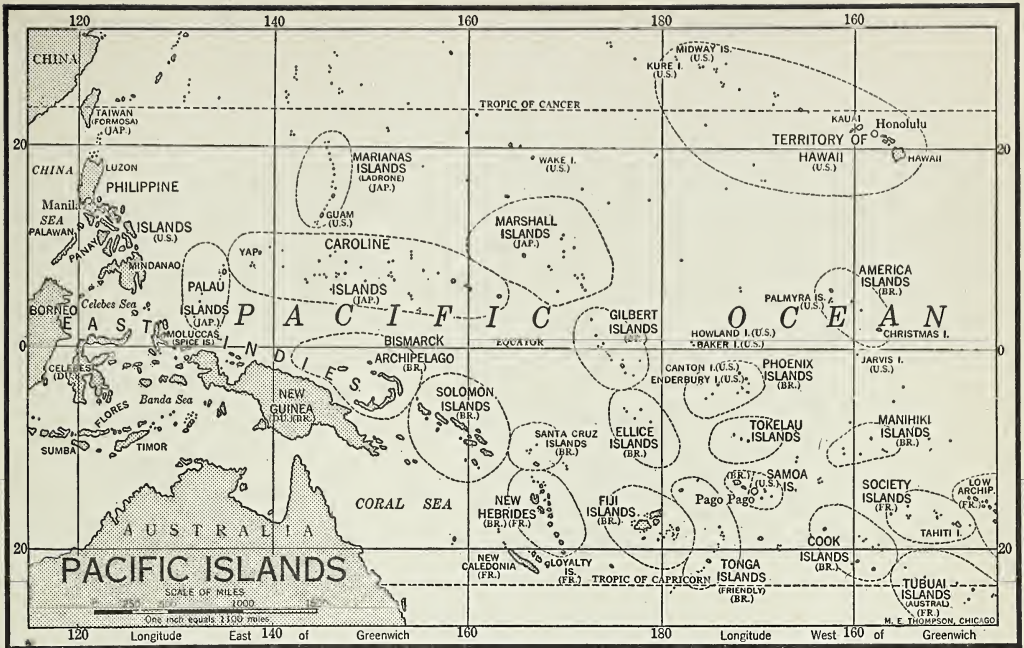


Fig. 577. The dotted lines show the different groups of Pacific islands. The abbreviations below some of the names tell you what countries controlled the groups before the war.

OUR OTHER ISLANDS

Airplane bases in the ocean. Only a few years ago people traveling from the United States to Asia had no choice of transportation. They had to take steamers. But the clipper airplane made it possible to fly passengers from the United States across the Pacific on a regular schedule and in an astonishingly short space of time.

These regular air-lines across the Pacific were possible because the United States acquired islands that could be used as stopping-places for airplanes. It was necessary to have places to build radio beacon stations at intervals along ocean routes. Guam and small Wake Island were two of these airplane bases and radio stations as well.

There are over eight thousand inhabitants of Guam which is a jungle of tropical forest. They belong to a tribe called Chamorros. Here and there the natives have little patches

of cleared land where they raise bananas, oranges, sweet potatoes, and melons. Coconut palms furnish food also, and quantities of copra are produced.

Guam is one of a group called the Mariana Islands. Ferdinand Magellan was the first white man to visit them. Because the natives stole a small boat from him, Magellan called the islands the "Ladrones," which is Spanish for thieves.

After the United States took over the island of Guam, an airplane base and a naval station were built there as well as a landing-place for the cable that runs from San Francisco to Manila.

There are two other tiny islands in the Pacific that are claimed by the United States. On the map on this page find the islands of Enderbury and Canton. These tiny little islands have not been inhabited. But some day they may be made into good stopping-places for our airplanes.

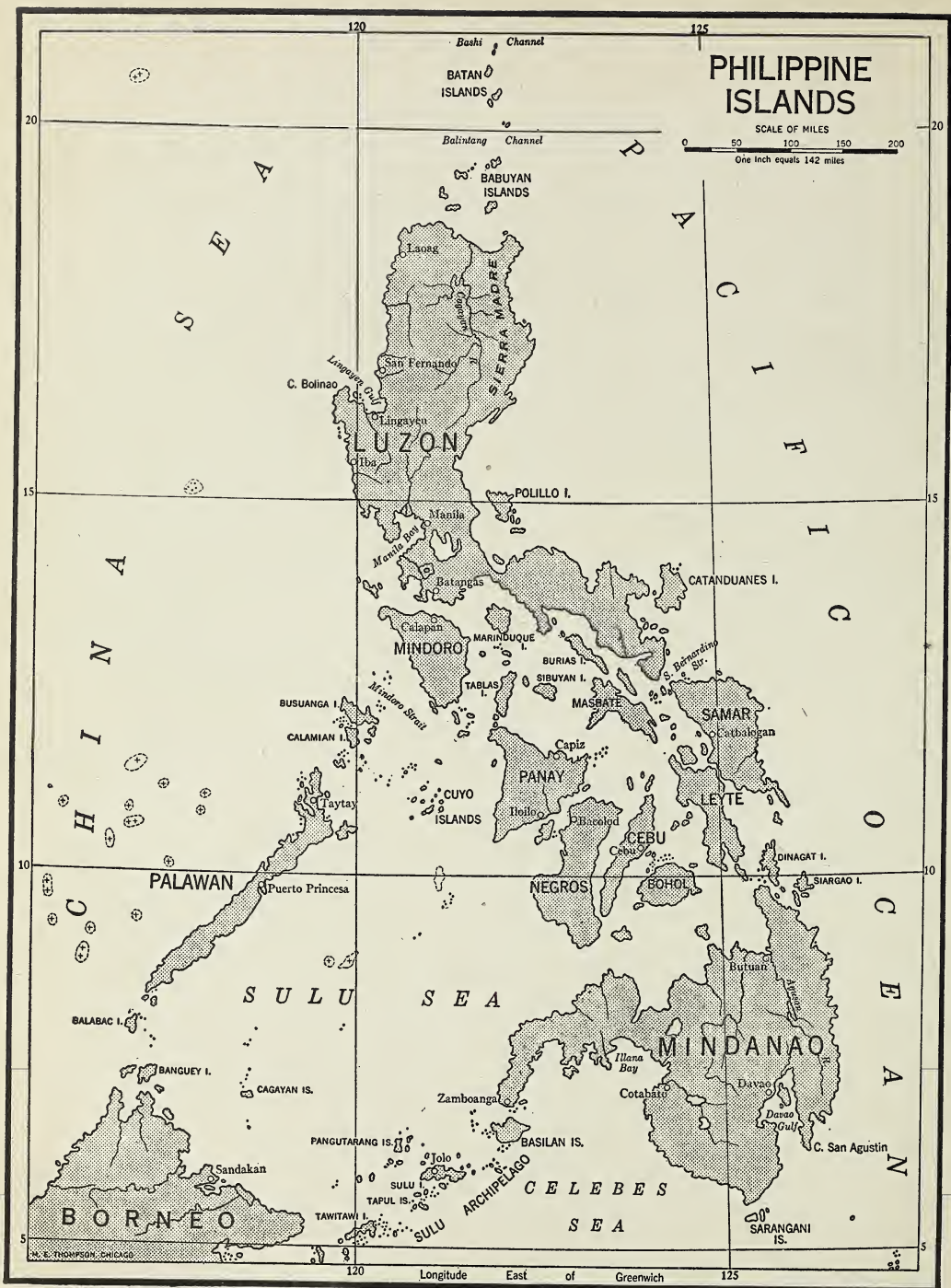


Fig. 578. Map of Philippine Islands



James Sawders

Fig. 579. These Philippine farmers are plowing their rice fields with water buffaloes. Rice grows well in most of the Philippine Islands, as the climate is warm and there is plenty of water. Rice fields have to be flooded with water during most of the growing season. Notice the long dike to keep water on the field.

THE PHILIPPINE ISLANDS

Their history. The Philippines are the most distant of all the lands in which the United States has a special interest. These islands came to us by treaty after the Spanish-American War in 1898. They were a United States possession until 1934. Then they were given gradually more and more independence. Although the President of the United States still sends a Commissioner to help govern the islands, the people have already written a constitution for themselves and elected a president. Under the present law, the Philippines should become an entirely independent republic in 1946.

These islands were discovered by Magellan on his famous trip around the world. He was killed on one of the islands by natives, but one of his ships finished the journey. Another Spanish navigator visited the islands and named them in honor of the Spanish prince, Philip.

The Spaniards held the Philippines for nearly four hundred years. Mexico and the

South American colonies of Spain revolted and gained their independence. But Spain held on to the rich Philippines until almost 1900.

What the islands are like. On the map on page 388 you see that the islands form a long chain. We call such a chain of islands an archipelago. There are 7083 islands belonging to the Philippine group. They are between the East Indies and the Japanese archipelago. The Philippine group is just about as large as the Japanese group.

There are two islands in the chain that are much larger than the others. These are Mindanao in the south and Luzon in the north. Between them are about eighty smaller islands. Besides the eighty there are thousands of tiny islands scattered about. Most of them are uninhabited. They are just roosts for sea birds.

The islands are the tops of a great chain of mountains that rise from the bed of the ocean. Only the tops of the mountains are above the surface of the water. More than



Paul's Photos

Fig. 580. There are many volcanoes in the Philippine Islands. This picture is of one called Mayon.

fifty of the peaks are volcanoes, and some of them at times are active.

When the volcanoes are active, the islands are often shaken by earthquakes. Manila has about one hundred earthquakes a year, although most of them are not severe.

The climate. The map shows you that the Philippines are in the Tropics. They have the same kind of climate that other tropical islands have. The days are warm through the whole year, and there is a great deal of rain.

Sometimes the winds that blow constantly on ocean islands become very strong. In the Philippines such storms are called *typhoons*. Typhoons do as much damage here as the hurricanes do in the West Indies.

Most of the islands, as you would expect in this warm, rainy region, have rich, tropical vegetation. The coasts are frequently swampy and covered with mangoes or lined with cocoanut palms. Inland, the slopes of most of the mountains are covered with a heavy forest. The natives have cleared some land in the valleys and on the slopes.

The natives. The natives of the Philippines are divided into many different tribes

and peoples. Probably the first inhabitants of the islands were the people called Negritos, which means Little Blacks. They are pygmies, who rarely grow to be more than five feet tall. The members of these tribes are savages and do not build houses. They live in the deep forests, killing game with bows and arrows.

On the slopes of the mountains of central Luzon live the Igorots. They make terraces on the steep hillsides and grow rice in flooded fields. They build thatched homes with cone-shaped roofs.

The Moros live on the island of Mindanao. Like the Igorots, they came from near-by islands many years ago. They are warlike and hard to govern.

There are seven tribes known as Filipinos. These people are different from the rest. When the Spaniards arrived, these people had a written language and had made some advance toward civilization. Spanish missionaries taught them Christianity.



James Sawders

Fig. 581. A tree-house on the island of Luzon.



Paul's Photos

Fig. 582. Wood-cutters had to build a platform thirty feet from the ground to cut down this jungle tree.

After the United States had taken over the islands, the Filipinos learned much from the Americans. They went to our schools and learned to read and write English.

Not all the people of the islands are Filipinos. Many Spaniards married Filipinos. Their children are called *mestizos*. There are many thousands of them. Many people from the near-by countries of Asia and from neighboring islands have gone to the Philippines to make their homes.

The work of our government. Our government made a great effort to improve conditions in the islands. Most of the work has been done in Luzon, especially in Manila, the capital. Wells have been sunk to provide good drinking water. Modern sewers have been built. The people have been taught ways of preventing disease.

The public schools teach many of the subjects we learn at home. They also give industrial training. The children learn weaving,

basket-work, and other handicrafts. There are schools to teach the Filipinos better methods of farming.

Before the Americans came, the farms were carelessly worked. Although the soil is fertile and there is plenty of good growing weather, many Filipino farms barely supported their owners. Under Spanish management the large plantations had run down.

The chief products. Most of the large plantations were developed and operated by Americans. The largest are the sugar plantations. Sugar is the most valuable crop. Ordinarily about fifty million dollars' worth of sugar is exported to our country every year.

The most important crop to the Filipinos is rice. They use all the rice they grow and have to buy more from their neighbors in near-by countries. Rice and fish are the principal foods of the Filipinos.

Millions of cocoanuts are gathered every year in the islands. Coconut products form valuable exports, especially coconut oil and the dried meat of the nut, called *copra*, which are sent to the United States. The oil is especially valuable for making soap.

Another valuable product of the Philippines is manila fiber. Manila comes from a



Paul's Photos

Fig. 583. These Philippine workmen are drying cocoanut meat in an open shed in order to make copra.



Paul's Photos

Fig. 584. These houses on the island of Jolo are built over the water for protection.

plant, the *abaca*, which belongs to the banana family. The leaf stalks have long fibers that make especially strong ropes and twine.

A great deal of tobacco is also grown in the Philippines. Many cigars are exported, but the people use much of the tobacco at home.

Except for the large sugar and cocoanut plantations, the farms are mostly little patches of cleared ground. Each family has a small clearing in the forest.

Many of the Philippine forests are of hard wood, such as mahogany, but not much of the wood is cut for lumber. The natives find it much easier to use bamboo for their furniture and for their houses.

Industries of the Philippines. You remember that the natives of Puerto Rico make hats and do fine embroidery. The Filipino women also make embroidery and lace. They weave cloths called pineapple cloth and *jusi* cloth. They also make hats and mats of straw and fiber.

There are some minerals in the Philippines—gold, silver, lead, zinc, and copper. And there is coal. But these minerals have been little mined, except for gold. With few minerals ready for use, there are few manu-

facturing establishments. The only factories that are like our factories are those for making tobacco into cigars and cigarettes.

The need for good roads. The United States has helped to build about one thousand miles of railroad in the Philippines and about six thousand miles of good highways. But many more miles of roads will have to be built before the Filipinos can develop their country and take advantage of the natural riches of the islands.

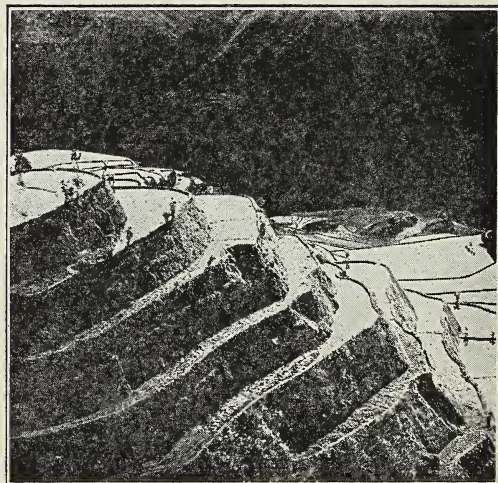
QUESTIONS TO ANSWER

1. In what ways are the Philippine Islands and the other tropical islands you have studied alike? Compare their climate, crops, industries, and inhabitants. How do you explain the fact that they are somewhat alike?

2. Why do roads and railroads help in developing a country? Explain why the Philippines need better transportation before the minerals of the country can be used more fully.

3. Why are there so many Japanese among the inhabitants of the Philippine Islands? Does it help you answer the question if you study a map showing the location of the islands?

4. Why is it helpful for the United States to have airplane bases in various parts of the Pacific Ocean? On a map of the world or a globe compare the size of



Paul's Photos

Fig. 585. Rice terraces on a mountainside.



Paul' Photos

Fig. 586. This river at Manila, in the Philippine Islands, is crowded with boats of many kinds. You can see several houseboats, covered over with straw matting, that have brought goods down the river to Manila.

the Pacific Ocean and the size of the Atlantic Ocean. Across which would it be easier to fly without stopping for fuel?

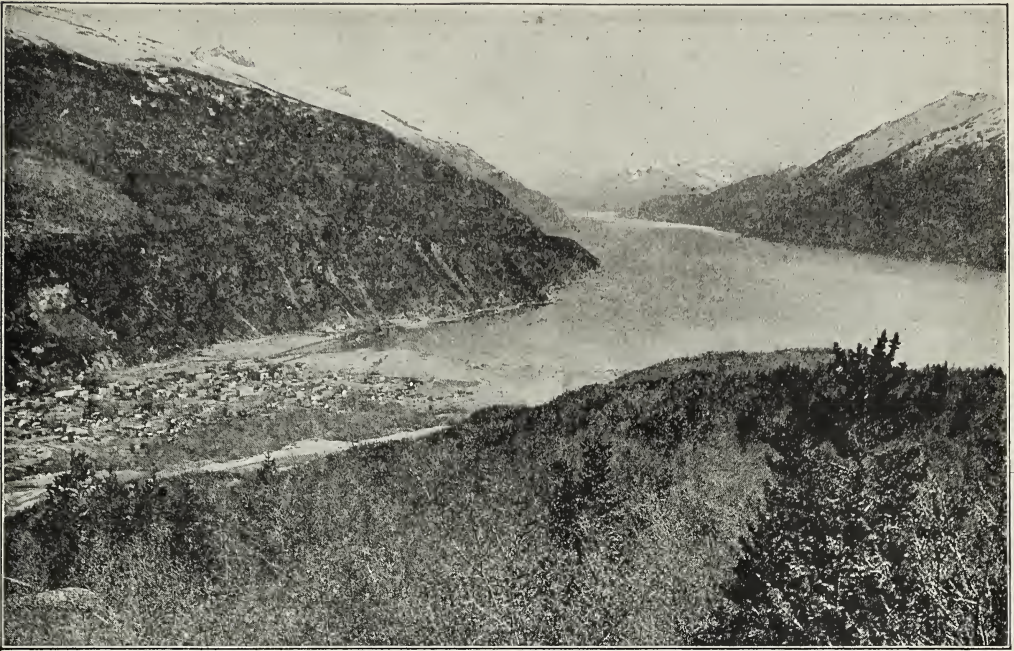
THINGS TO DO

1. Plan a peace-time trip that will take you to Puerto Rico, Panama, Hawaii, or the Philippine Islands. You might get travel folders describing trips on steamship or airplane lines. Decide just where you want to go and what you want to see. Decide whether you would make the trip by steamer or by plane and give reasons for your decision. It will be interesting to see the different trips the members of the class will plan.
2. Find pictures of steamships and clipper planes and put them on the bulletin-board in your room.
3. Make a collection of pictures showing as many as possible of the native tribes of the Philippine Islands and their homes. You will want pictures of pygmies, Igorots, and Filipinos, among others. You can probably find pictures in magazines and newspapers.

4. Find in history or reference books at the library the story of Admiral Dewey and the Battle of Manila Bay. Be prepared to give a brief account before the class.

5. Ordinarily life in the Philippines is much like life in the Hawaiian Islands, but you would probably find it very different from life in the United States. Write a story comparing a child's life in the United States with a child's life in the Philippines. Write about the animals and plants, and the different customs of the peoples. You can find many interesting books to read about the Philippines. Some of them are *A Little Journey to Hawaii and the Philippines*, by Marian M. George; *Our Little Philippine Cousin*, by Mary H. Wade, and *Barbara's Philippine Journey*, by Frances Burks.

6. You can read some more interesting things about the island of Guam and the Philippine Islands in *New Little Americans*, by Mary H. Wade. The section on Guam is from page 94 to page 105, and that on the Philippines is from page 106 to page 160.



Paul's Photos

Fig. 588. Skagway, Alaska, is a busy port on a deep arm of the sea between high mountains.

ALASKA

The first white settlements. Almost two centuries ago a dozen men, bundled in short fur jackets and with fur caps pulled down over their ears, buckled on their skates and shouldered their guns. They were Russians setting out from the little settlement at St. Nicholas on East Cape in Siberia. They were going to try to cross the ice that covered Bering Strait the narrowest strip of sea between Siberia and Alaska.

There was a space of only thirty-six miles to cross. When they reached the other side of Bering Strait, some of the men set about building a shelter. The rest divided into two hunting parties.

Game was plentiful. The Russians were after furs and found them in abundance. For years parties of Russian fur-trappers and traders kept coming to Alaska. Finally they built a settlement on Kodiak Island and an-

other one at Sitka. They trapped and traded with the Eskimos and other Indians for furs, which they sent to Europe.

The Russians did nothing to develop the country. About all they did was to take out millions of dollars' worth of furs and fish during the time they owned it. Finally they sold the territory to the United States for \$7,000,000. Since we have owned Alaska, many settlers have gone there to live, but it is still a frontier land.

The land and its climate. Look at the map on page 394 and note the general shape of the land. Many streams flow down the small valleys to the coast. These valleys run inland about two hundred miles. They end among the peaks of the Alaskan Range, a chain of snow-capped mountains.

The Alaskan Range is a part of the enormous chain of mountain-ranges, or *cordilleras*, that runs along the western edge of both North and South America.

These valleys as well as the mountain slopes along the coast are covered with a dense forest. Wherever you see a thick growth of trees, you know that the region must receive plenty of rain. There are heavy rains here throughout most of the year. When we compare our country with Alaska, we find that in the United States we get an average of thirty inches of rainfall per year, while this part of Alaska gets from fifty to one hundred twenty inches. In the mountain regions the moisture falls as snow. On the coast there are long, rainy, mild winters, and short, damp, mild summers.

If you look at the map on page 394, you can see some of the reasons why the coastal part of Alaska is so rainy. You see that Alaska is a great peninsula. It projects into the Arctic Ocean on the north, and into Bering Sea and the Pacific Ocean on the west and southwest. The long line of Aleutian Islands extending westward is made up of low islands that do not shut out any winds.



James Sawders
Fig. 589. This Alaskan fur trader gets furs from the hunters and stores them until he can send a shipment to fur markets in the United States.



James Sawders
Fig. 590. These Alaskan Eskimos are living in their summer home, which is built of rocks, sod, and poles covered with tough grass.

The winds blow steadily from west, north-west, and southwest for most of the year. Cold air that has blown over miles and miles of cold Siberia and the cold Arctic Ocean meets warmer air that has blown over the warmer Pacific Ocean. As the moisture in the warm air is suddenly cooled, it falls in the form of either rain or snow.

The Pacific Ocean has a current flowing through it that is almost like a river in the ocean. This moving water is called the Japan Current, and it is much like the Gulf Stream in the Atlantic Ocean. The Japan Current is a stream of water warmer than the rest of the ocean. The air over this current of water is warmed by it. That is one reason why the southwest winds that reach Alaska are wet and warm. These winds bring the rain.

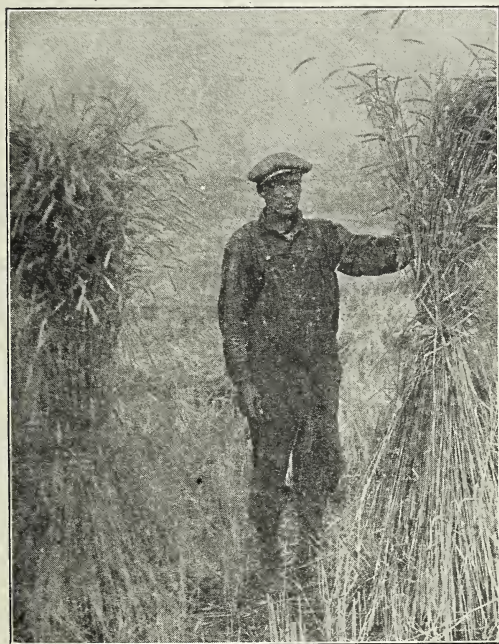
As the winds blow inland, the clouds must rise in order to pass the mountains. You know that when the clouds rise very high, they reach colder air. Then the moisture turns to rain or snow. There are huge glaciers in Alaska formed from the snow and ice.

The resources of Alaska. The glaciers, the mountains, and the dense forests make beauti-

ful scenery, but the coastal part of Alaska is too cool for growing many crops. The wealth of this part of the country is in its fisheries and in the lumber from the forests.

Back of the Alaska Range, inland, is a vast plateau. It is about the size of Nebraska and North and South Dakota together. This plateau contains most of the farm-land of Alaska. There are many broad valleys in the plateau. The largest stream is the Yukon, which steamers can use for 2200 miles. Other rivers are the Kuskokwim, the Copper, the Tanana, and the Susitna.

Although the summer season is short in Alaska, the days have eighteen hours of sunshine. You know that the two most important things for growing plants are sunshine and moisture. In the farming region of Alaska the sun shines enough during the short summer to make crops of rye, barley, potatoes, and hay. Here and there throughout this



Paul's Photos

Fig. 591. Long summer days produce large crops of grain in the Matanuska Valley in Alaska.



Paul's Photos

Fig. 592. Mining in Alaska with streams of water

section are small truck gardens. But the farmers produce no more than enough for their own use and for the mining and lumber camps.

On some of the meadows cattle graze. But as the rainfall east of the mountains is light, grass does not grow well, and the better grazing lands are farther north where the mountains are lower. Can you tell why there is less rain east of the mountains?

On the pastures farther north, reindeer are raised. This is a new and growing industry. There are vast areas that are suitable for reindeer pastures. This region is called the Arctic Plains.

The Arctic Plains. The Arctic Plains are separated from the central plateau by a chain of mountains, the Brooks Range. The streams from this range of mountains flow to the north. They are slow streams that wind through marshes and empty into the Arctic Ocean.

In this region the winters are long and severe. The summers are short and cool. During the summer there are a few weeks when the sun shines twenty-four hours a day. The soil thaws out for a few inches, and grass and flowers spring up. But for most of the



James Sawders

Fig. 593. A salmon fishing fleet at anchor in one of the sheltered harbors of Alaska.

year the ground is frozen. The air is too cold to hold much moisture, and so the rainfall is only about six or eight inches a year.

The "Gold Rush." For many years after the United States bought Alaska, most people thought that our money had been wasted. Then came tales about the finding of gold. Thousands of gold-seekers rushed to the Yukon country to look for gold. This region, called the Klondike, proved to be one of the great mining regions of the world. Some of the prospectors washed fortunes from the gravel of the rivers. Others lost everything that they had.

Today the gold is chiefly taken from mines. Instead of prospectors working with pick and shovel and pan, the gold is washed out by great power-driven streams of water, or dug from mines.

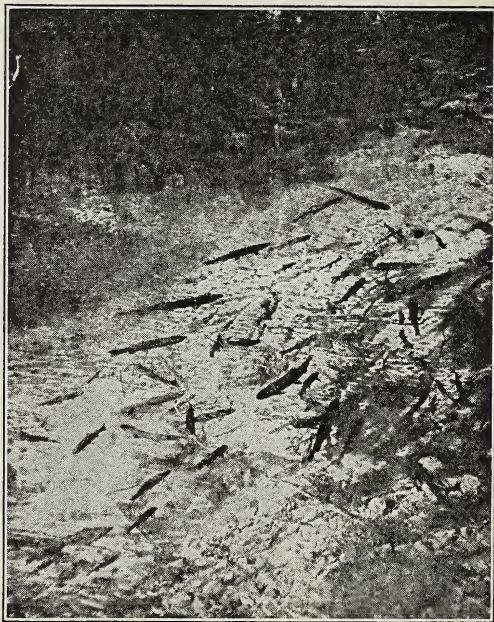
Copper mining near the coast and in the Copper River Valley has been profitable. Today all the copper that is mined is worth more than all the gold. Mines farther inland are not developed. There must be good transportation to mines, and Alaska does not have good transportation.

There are only about one thousand miles of railway in Alaska. If there were more railroads, Alaska could ship the coal, marble, gypsum, platinum, silver, lead, and tungsten that are buried in her mountains.

Most of the 55,000 people of Alaska live in the southeastern part of the peninsula. Nearly half of them are Indians and Eskimos. There are only five towns with more than a thousand population. Juneau is the largest, having three thousand people.

The fisheries. The Alaskan fisheries have produced much wealth. Now they are the most important industry. Nine-tenths of the fish caught are salmon.

The salmon are born in the streams of Alaska. While they are still tiny fish, they swim down-stream to the ocean by the millions. There they stay until they are from two to five years old. Then they return to the stream where they were born to spawn. During the spawning season the salmon are



James Sawders

Fig. 594. These salmon are fighting their way upstream through the rapids of a swift Alaska river.



James Sawders

Fig. 595. The rocky Pribilof Islands in Bering Sea are the homes of thousands of fur seals in certain months of the year. The rookeries, as these breeding places are called, are protected by law.

caught in huge numbers off the coast and in the rivers.

Canneries have been built in many places in Alaska, and other canneries have been set up on board ships. They all work night and day when the salmon are "running."

The fur business. Furs are important today in Alaska, just as they were when the Russians first came. About three million dollars' worth are taken every year. One of the important sources of fur is the seal. The islands off the Alaskan shore are the breeding places for seals. But sealing-vessels killed so many of the animals that the herds were reduced from millions to only about one hundred thousand.

Laws were passed to protect the herds. Other nations agreed to respect the laws, and

now the herds have grown larger. There are about seven hundred thousand seals at the present time. The herds are watched by United States ships. Government men see that only a certain number are killed for their fur each year.

Protecting Alaska's resources. Our government is determined that the resources of Alaska shall not be wasted as so many of the resources in the United States have been. There are laws to protect fish and game so that there will always be a supply. The forests are under government protection. And there are laws regulating mining. When transportation has been improved, these resources will mean great wealth for Alaska.



Paul's Photos

Fig. 596. Herds of reindeer have been brought from Lapland to Alaska in order to provide a steady supply of meat. Even when the ground is covered with snow, the reindeer seem to find enough to eat.

QUESTIONS TO ANSWER

1. What do you think were some of the reasons why the United States bought Alaska from Russia? In what ways has Alaska been valuable to the United States? 2. Why did the United States Government make laws protecting the seals, fish, forests, and mines of Alaska?

3. Where else in the text did you read about fishing for, and canning, salmon? Find the description of a salmon cannery and reread it. Why would it be convenient to have a cannery on board the fishing ship? 4. Explain why Alaska has so much rain.

THINGS TO DO

1. There is a great deal of beautiful scenery in Alaska. Make a collection of pictures of places in Alaska for an exhibit. Include pictures of mountains, glaciers, forests, rivers, and snow scenes of the Arctic regions. It will be interesting to include pictures of Eskimos and their dwellings, of salmon fishing, and of mining. 2. You saw in the section of the text dealing with our tropical islands how the climate and geography of the islands affected the way the inhabitants lived and the crops they grew. How does the climate affect the way the people of Alaska live? 3. Discuss briefly the importance of the fur-trade in the history of North America. Begin with the days of exploration and settlement of the Atlantic seacoast and including Alaska at the present time.

4. You remember reading how people rushed to California when gold was discovered there. There was a similar rush to Alaska when gold was discovered in the Klondike region. Many exciting stories have been written about Alaska in the days of the gold rush. Ask the librarian at your school library or at the public library to help you find some of these stories. You might read interesting portions of them to the class. 5. You read in this section how the government now protects the natural resources of Alaska so that the people can continue to enjoy them for years to come. The government tries to protect some of the resources of the United States in the same way. Ask your librarian to help you find material telling of the ways in which the government protects our forests, our game and fish, and even the lovely scenery in our National Parks.

6. You will probably want to read more about Alaska. Reading will help you in preparing written and oral reports on that country. If you would like to know something about the odd and interesting totem poles of the Alaskan Indians, read pages 39-42 of *A Little Journey Through Alaska*, by R. Leslie Gordon. If you want to make a report on salmon fishing in Alaska, read pages 34-35 of that same book, or pages 57-61 of *Little Journeys to Alaska and Canada*, by Edith Klingman Kern. These are only two of the many fascinating topics on Alaska that the two books mentioned discuss.



Paul's Photos

Fig. 597. There are few roads in Alaska, and many regions can be reached in winter only by trails over the mountains and through the forests. Goods have to be hauled by dog sledges or else by airplanes with skis instead of wheels for landing.



Paul's Photos

Fig. 598. In the prairie provinces of Canada are many large farms where wheat is raised. The picture shows two harvesting and threshing machines, called "combines," cutting wheat on a farm in the province of Saskatchewan. Each combine cuts the standing wheat in a path many feet wide. The wheat is threshed as the combine moves along and is then ready to be loaded into wagons or trucks. When the farmer is ready to sell his grain, trucks carry it to the nearest elevator located along the railroads.

OUR NORTHERN NEIGHBOR THE 'DOMINION OF CANADA

The search for a sea route to the East. Perhaps the first white men to visit Canada were the Vikings. These daring seamen had colonies in Iceland and in Greenland. They had sailed west and had reached the mainland of North America about the year 1000. But if the Vikings ever reached Canada, they did not stay. They may have told the people at home in Europe about the new land, but no one cared to visit it.

You have read how Columbus sailed to the islands of the West Indies in 1492. You know that Columbus tried to get help from several kings in the different European countries. All the countries wanted to find a way to reach India and the rich islands of the East by water. England, too, wanted to find a sea route to

the eastern lands, but the English king, Henry VII, refused to help Columbus.

When Columbus returned from his first voyage, everyone thought that he had found a new way to reach India. People expected that the Spaniards would become wealthy from the rich cargoes that their ships would bring back. Of course the English wanted a share of this trade. And so, when another Italian sea-captain asked the English king for help, the English king gave him a ship.

Voyages of the Cabots. This Italian sea-captain was called John Cabot by the English. He sailed westward from England to find a way to reach India. In 1497 he landed on what is now called Cape Breton Island and sailed past Newfoundland. The next year he

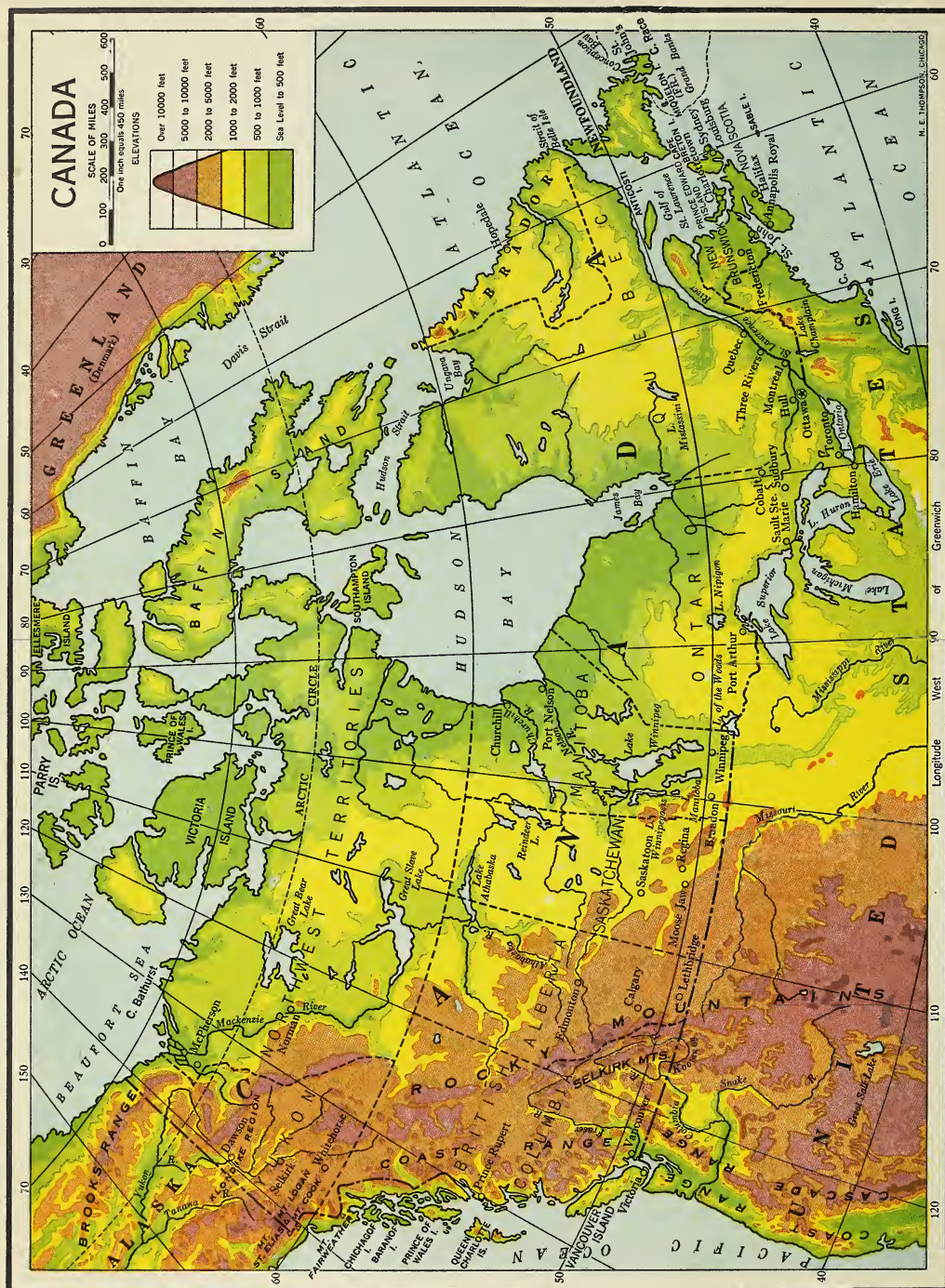


Fig. 599. Map of Dominion of Canada



Paul's Photos

Fig. 600. The Gaspé Peninsula in the Gulf of St. Lawrence was settled many years ago by French people.

made another voyage to the new land and sailed as far south as Maryland.

The English claimed the mainland of North America because Cabot was the first discoverer to reach it. For a long time, though, they did not make any use of the new land. Cabot brought back news about good fishing grounds. From that time on, French and Portuguese fishermen sailed every year to the Grand Banks, near Newfoundland.

John Cabot's son, Sebastian Cabot, also made voyages for the English king. He tried to find a way through the new continent by water. You have read about the Northwest Passage, and how sailors searched for it year after year. But no one ever found it, of course.

The French in North America. Spain was getting so much gold and silver from her lands in the New World, that France decided to send her own explorers. In 1534 Jacques Cartier found the Gulf of St. Lawrence. He thought he had discovered a water way through the continent. Next year he discovered the St. Lawrence River.

Another Frenchman, Samuel de Champlain, came to the New World. Lake Cham-

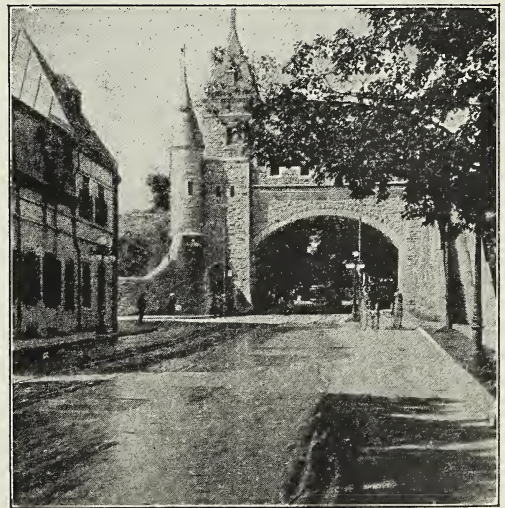
plain is named for him. He explored part of the great St. Lawrence Valley and reached Lake Huron. Champlain founded the city of Quebec in 1608. He is called "The Father of Canada."

Although the English claimed the new land, the French were the first to plant colonies on it. Some of the first French colonists settled in a land they called Acadia. Today we call it Nova Scotia.

Other Frenchmen settled along the St. Lawrence River. Most of the settlers were farmers, but there were many traders and trappers among them. In Europe people paid good prices for the furs which they shipped back to France. So the fur-trappers and the traders explored the country toward the west.

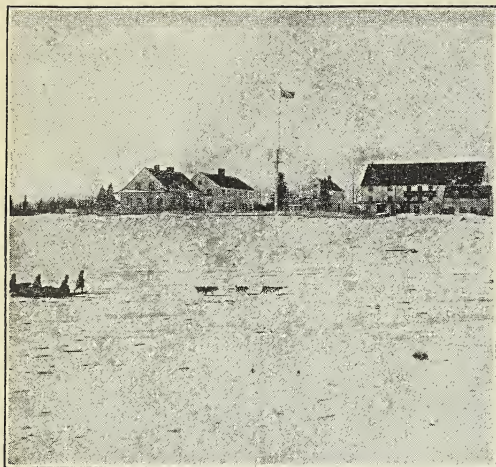
The French traders made friends with the Indians and learned from them where the best fur country was to be found. The trappers followed the shores of the Great Lakes and the rivers. With them often went missionaries. Here and there they built little trading-posts and missions.

The Hudson's Bay Company. Meanwhile the English, too, went into the fur business.



Paul's Photos

Fig. 601. Quebec was once a walled city. Here is the St. Louis Gate and part of the old city wall.



Paul's Photos

Fig. 602. This is a trading post of the Hudson's Bay Company, located far to the north in the province of Ontario. Notice the dog sledge.

A great trading company, called the Hudson's Bay Company, was formed in 1670. This company sent men to America to trade with the Indians for furs. The company built many forts and trading-posts. Year after year they built more posts, always farther to the west.

Canada becomes an English possession. As there were many more French than English along the St. Lawrence River, the French people ruled that part of the country. The Hudson's Bay Company ruled that part of the country around Hudson Bay. The English also ruled the colonies south of the St. Lawrence River and the Great Lakes. After a time England and France went to war, and the French lost Canada. You have read about this war, which we call the French and Indian War. Canadians call it the Seven Years' War.

During the American Revolution over 35,000 American colonists moved to Canada. They were people who remained loyal to the British and did not want to join the revolt of the colonies. They settled in Nova Scotia, New Brunswick, Prince Edward Island, and Ontario. Other colonists came from England to make new homes in Canada. Finally there

were more English-speaking people in the country than French-speaking people.

Home Rule for Canada. The British did not wish to lose Canada as they had lost the United States, and so the Canadians were allowed to elect assemblies. But the assemblies did not have much power, and there was a small rebellion in 1837. Although this rebellion was not successful, it showed the British that the Canadians should really be allowed a larger share in their government.

Little by little the Canadians gained more and more rights until now they are an independent nation. They make their own treaties and have their own representatives in foreign countries. But Canada still calls itself a part of the British "Commonwealth," and the British king is their king, too.

As you can see by the map on page 10, Canada is larger than the United States. Canada is divided into provinces, much as our country is divided into states. There is also a region called the Northwest Territories that has not yet been divided into provinces. Today there are about 11,000,000 people living in the provinces and territories of Canada.

Five great natural regions. Nature made five regions in Canada. The first consists



Paul's Photos

Fig. 603. A Canadian fur-trapper setting a trap

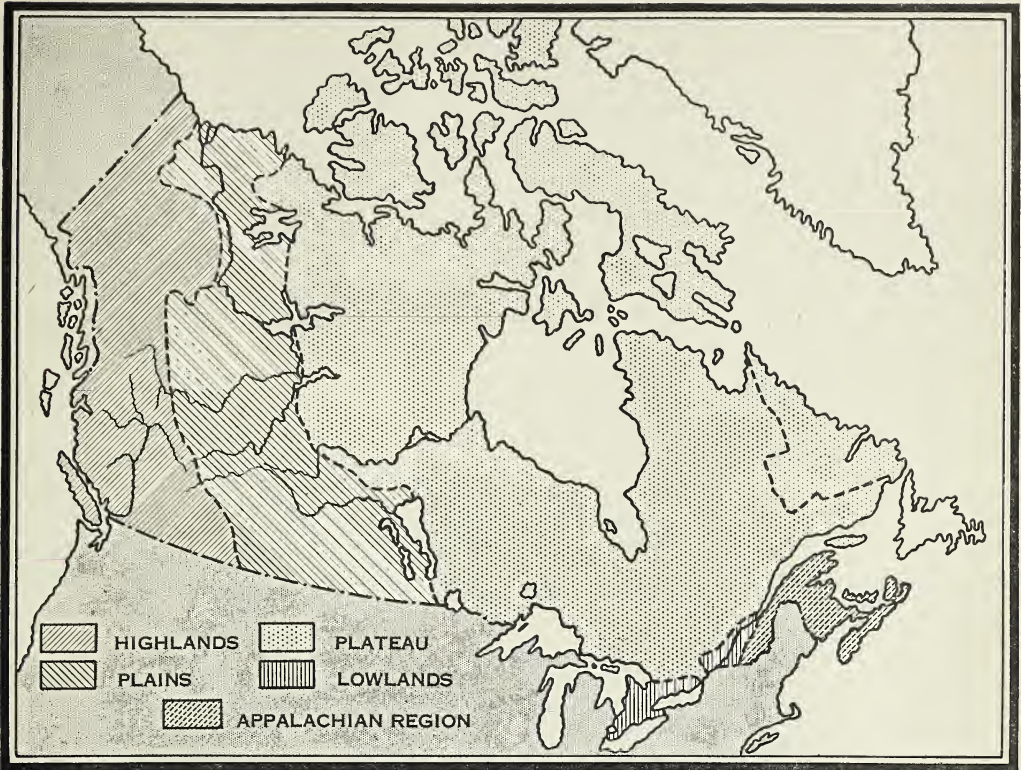


Fig. 604. Notice the five natural regions of Canada. Compare this map with the map on page 402 and see how the plateau region slopes downward toward Hudson Bay. You can also see how the plains region extends into the United States. The western highlands does the same. Find the lowlands and the Appalachian region.

of the Maritime, or seaside, Provinces and part of the St. Lawrence Valley. It is called the Appalachian region. The second region is called the St. Lawrence Lowlands. Find them on the map on page 402. The third region is a large plateau called the Laurentian Plateau. The fourth region is composed of the prairies, or interior plains. The fifth consists of the western highlands and the Pacific coast. Let us get a bird's-eye view of these regions and see what kind of country and climate our Canadian neighbors have.

THE APPALACHIAN REGION

A New England climate. The coast of Canada on the east is cooled by the cold Labrador Current. The cold air sweeping

across the Labrador Current makes this part of Canada much cooler than you would expect it to be when you see it on a world map. These Maritime Provinces are no farther north than France, but they are much cooler.

The cold waters of the Labrador Current meet the warm waters of the Gulf Stream near the Maritime Provinces. This makes fog and mist.

Since the winds also bring abundant rain, the hilly parts of this region are thickly covered with forests of oak, beech, and birch. You know that thick forests cannot grow without plenty of rain. In this hilly region with its heavy rainfall, there are many streams and waterfalls.

One of the world's great fishing centers. In the Maritime Provinces most of the peo-

ple live along the coast. Ever since the French came in the sixteenth century, there have been fishing villages here. Almost every village has its own little fleet of fishing vessels, its own drying sheds, and its own cannery.

The fishing grounds off the coast are among the most important in the world. Cod, halibut, herring, lobster, mackerel, and haddock are caught in huge numbers.

Lumbering and farming. Farther back from the coast, the hilly country is covered with forests. In this region, particularly in New Brunswick, lumbering is a great industry. And the inland valleys provide fertile soil for many farms. Most of the farmers raise hay and clover. Potatoes, turnips, and such fruits as apples and berries are raised abundantly.

In Nova Scotia the Annapolis-Cornwallis Valley is called the "Garden of Nova Scotia." It grows many apples that are noted for their flavor.

Other industries. A growing industry is the breeding of foxes for their furs. There are about two thousand fox farms in the Maritime Provinces. In a single year these farms produce about four million dollars' worth of furs.

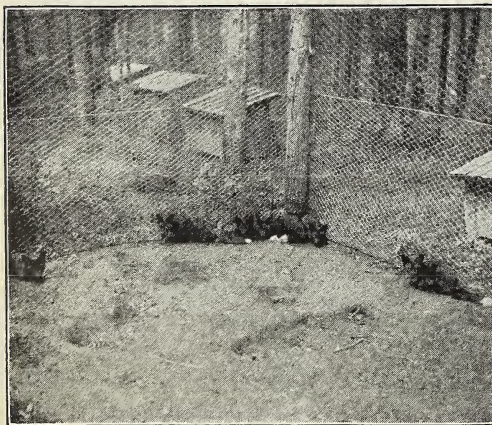
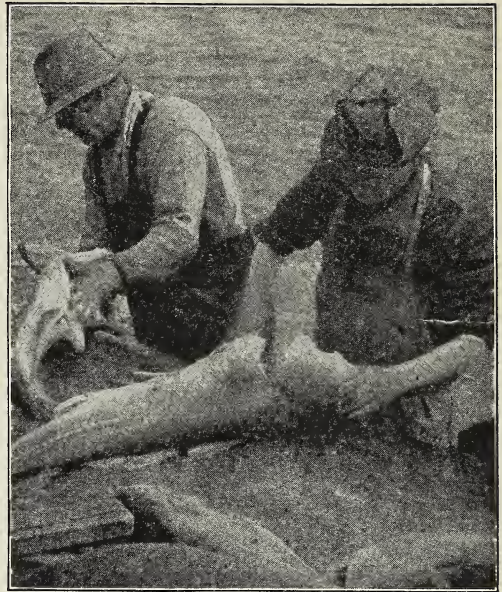


Fig. 605. Prince Edward Island, in the Gulf of St. Lawrence, has many fox farms. Thousands of foxes are raised for their furs on these farms.

Paul's Photos



Paul's Photos

Fig. 606. Cod fishermen cleaning their catch

There are coal fields in Nova Scotia with good iron mines near by. And there is limestone, too, so that all the materials for making steel are close together. Sydney is the great coal shipping port of Canada.

Another mineral that is mined close to the coast is gypsum. Most of it is shipped to the United States, where it is used to make plaster for walls.

Leading maritime cities. The leading city of the Maritime Provinces is Halifax, Nova Scotia. It has a fine ocean port, as its harbor is free from ice the year round. This is important, as Canada sends and receives much ocean freight. When the St. Lawrence River is frozen and ships cannot reach the ports farther inland, Halifax is one of the two great eastern ports that must handle the freight. The Canadian National Railroad ends at Halifax. Grain from western Canada, dairy products, and fish from the Maritime Provinces are exported.

The second city of this region is St. John. It lies at the mouth of the Saint John River,

and is the second port of the Maritime Provinces.

Newfoundland. Newfoundland is not a part of Canada, but is a separate colony of Great Britain. While it is a colony itself, it also has a colony of its own, Labrador.

Most of Newfoundland is a wilderness. The settlements are along a narrow strip of coast. The interior is filled with forests of evergreens. Because the soil is thin and rocky and the weather is cold and bleak, not much farming is carried on. A little hay is grown, and a few dairy cattle are kept. There are a few small patches of potatoes and cabbages. But most of the settlements are fishing villages.

Saint John's is the only large town in Newfoundland. Almost a fifth of the people of the colony live there. At Conception Bay there are deposits of iron ore, but they have not been worked very much.

Lonely Labrador. Labrador has only three or four thousand people in little fishing villages scattered along the coast. On the southern coast live the Cree Indians, and to the north are tribes of Eskimos. Some of them



Paul's Photos

Fig. 608. Farming country in New Brunswick

trap for furs in the interior, but most of them fish for a living. In the interior there are great forests of spruce and deposits of minerals. They are not yet of use because there is no transportation.

THE ST. LAWRENCE LOWLANDS

The valley of the St. Lawrence. West of the Maritime Provinces are the provinces of Quebec and Ontario. Look at the map on page 402 and see how easy it was for the first settlers and the fur-traders to follow the Gulf of St. Lawrence and then the St. Lawrence River for hundreds of miles into the interior.

The valley of the St. Lawrence is a rich lowland that extends six hundred miles east and west and about three hundred miles north and south. More than sixty per cent of the people of Canada live within this valley region of the St. Lawrence.

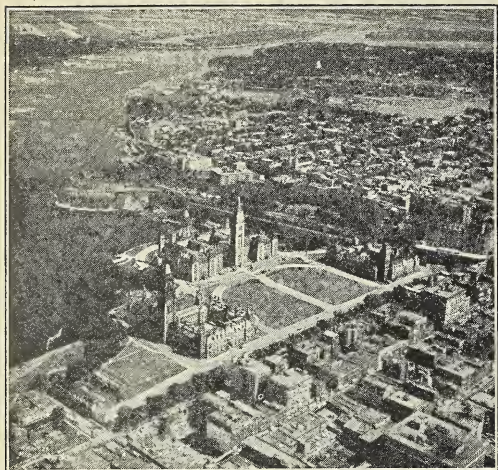
Farming. In this region the farming is much like that of the New England states. The climate is suitable for growing cereals and some kinds of fruits. The winters are more severe than on the coast, but the summers are longer and warmer. The moist air helps the growth of rich grass for pasture.

Nearly three-fourths of the cultivated land



Paul's Photos

Fig. 607. Hilling potatoes in Nova Scotia



Paul's Photos

Fig. 609. This air view of Ottawa, Ontario, the capital of Canada, shows the government buildings and a part of the city. Ottawa is located where the Ottawa and Rideau rivers join.

in this region is used for dairy cattle. Milk, butter, and cheese are produced in large quantities. Along the shores of Lake Ontario and Lake Erie there are vineyards and orchards that are noted for their fine grapes, apples, and peaches.

A manufacturing region. The many streams of this hilly region provide abundant water-power. Many people live here and work in factories, as this is Canada's manufacturing region. There are railroads to carry the products to market. More than 80 per cent of Canada's manufacturing is done in this St. Lawrence Valley region.

Old and busy cities. Montreal is the greatest manufacturing city of Canada. It is first also in size and in commerce. Although its port is closed by ice in the river for four months each year, it is one of the great grain ports of the world.

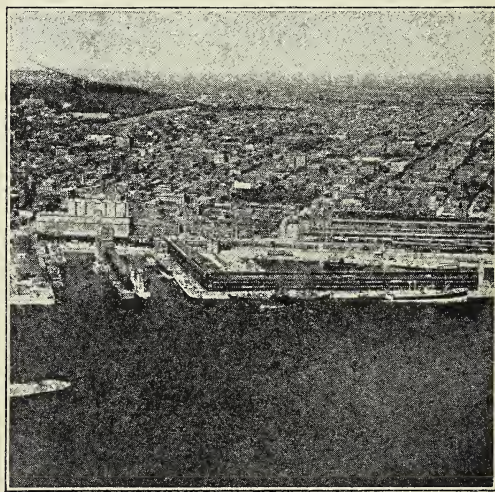
Toronto, the second city, has a good harbor and is a railroad center. Quebec, the old French capital, is one of the most interesting cities in America. Ottawa, the capital of Canada, is the center of the wood-pulp and paper industry.

THE LAURENTIAN PLATEAU

The Canadian Shield. North of the St. Lawrence Valley, curving around the lower part of Hudson Bay, is a plateau that is called the Canadian Shield because of its shape. It is mostly covered with forests, although here and there are great expanses of bare rock. Look at the map on page 405 and locate the region between Hudson Bay and the northern shores of Lake Huron and Lake Superior.

As the winters are severe and the summers short, only a few people live in the Canadian Shield. Most of them are busy trapping, lumbering, or mining. Half of Canada's mineral wealth is in the Shield region. Here are the Sudbury nickel mines, the copper mines of Lake Huron, the silver mines of Cobalt, and the gold fields of the Porcupine region. Southeast of Quebec there are rich asbestos mines.

On the map on page 402 find Great Bear Lake. Around this lake are huge deposits of copper and silver, and the ore which contains radium. The development of this region has been handicapped because there is no cheap transportation.



Paul's Photos

Fig. 610. In the foreground you can see some of the docks for ocean steamers at Montreal. In the background, at the left, you can see part of Mt. Royal.



Paul's Photos

Fig. 611. Sheep grazing on the plains of Alberta.

THE PRAIRIE PROVINCES

A great lowland. The interior of Canada is an immense lowland region. It stretches westward from Hudson Bay to the great belt of highlands. These prairie plains include the provinces of Manitoba, Alberta, and Saskatchewan. The leading city of this region is Winnipeg, which is often called the Chicago of Canada. What reasons can you give to explain this?

This part of Canada is really a part of the Great Plains region that stretches from the Arctic Ocean to the Gulf of Mexico. It has much the same kind of climate, with cold winters and hot summers. But as you travel northward, of course the winters become longer and the summers shorter.

The soil of these plains is fertile, like the prairies of our country. Except along the streams there are not many trees. The region is quite dry, so that the lands are suited to grass and to grain such as wheat.

One of the world's great granaries. On these plains are grown half of the farm crops of Canada. The people grow large crops of wheat, oats, and barley on this fertile soil. A network of railroads provides transporta-

tion to world markets by way of the great shipping centers of Montreal and Vancouver. Great quantities of the grain are shipped by boat on the Great Lakes.

THE ARCTIC PLAINS

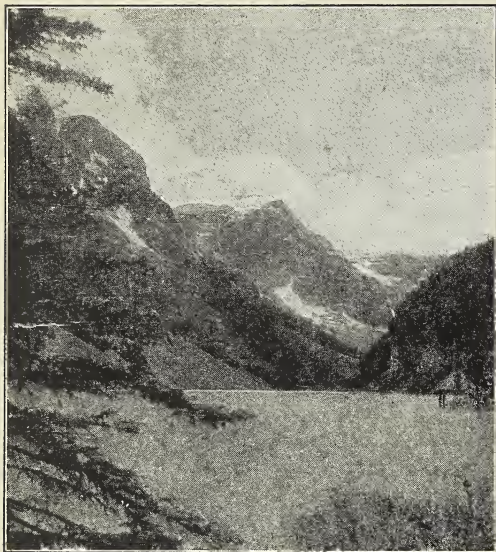
Vegetation. Lying north of this great plain are the Arctic plains. If you journeyed northward from the wheat-fields of Canada, you would first come to a region covered with a dense forest of evergreen trees, mostly spruce and pine. As you went farther north, the trees would thin out, becoming smaller and scrubbier. Finally you would reach the region where trees do not grow. Here the Arctic plain is mostly a kind of swamp land that is called *tundra*. Nothing grows there except a few stunted willows and birches, and some blueberry bushes, coarse grasses, and mosses.

Climate and people. The winters are long, dark, and cold. While there is not a great deal of snow, the winds are strong, and the cold is severe. In the far northern part there is a single month of summer, during which it



Paul's Photos

Fig. 612. There are many stock farms in Alberta, such as this one where beef cattle are raised.



James Sawders

Fig. 613. Lake Louise is in a vacation country

is light almost every hour of the day. In that short summer the bright sunshine brings out masses of flowers on the tiny plants and mosses that cover the tundra.

The people who live in the Arctic plain are Indians and Eskimos. They hunt and fish along the streams that flow northward through the swampy lands. None of these people knows anything about farming.

THE WESTERN HIGHLANDS

Three great ranges and a valley. West of the great plains of Canada lie the highlands. If you travel westward, the first range you come to is the Rocky Mountains. The second is the Selkirk Range, and the third, the Coast Range. In this highland region are plateaus and great valleys. Parts of the Kootenay, the Fraser, and the Columbia rivers flow through these valleys.

The western coast. The coast along the Pacific Ocean is somewhat like the coast of Norway. There are mountainous islands and many little peninsulas. There are hundreds of bays and inlets cut into the land like the fiords of Norway.

Along the coast the winds blow most of the time from the ocean. The winters are warmer and the summers cooler than they are in the interior. The sea winds are heavily laden with moisture and drop most of it along the coast.

The magnificent forests. Because of the abundant rainfall and the mild climate the Pacific Coast ranges have a dense growth of forest. Some of the trees are tremendous in size. The largest kinds are the Sitka spruce, the Douglas fir, and the red cedar.

The slopes of the Canadian Rockies are covered with evergreens, such as balsam fir, white spruce, and lodgepole pines. Here and there are open grassy places and lakes.

Where the people live. Part of Alberta and all of British Columbia lie in the Western Highlands. North of British Columbia is the Yukon Territory. Most of the people of British Columbia live in the southern part of the province. About half the people live in cities and villages, while the rest are in lumber camps, mines, or on ranches in the valleys.

Vancouver is the most important of the cities. The Canadian Pacific Railway ends



Paul's Photos

Fig. 614. Millions of feet of fir lumber have been stacked on this sawmill dock in British Columbia



Paul's Photos

Fig. 615. A small herd of caribou in the north

here, and there is a large, ice-free harbor. Vancouver is the center of the lumber industry of the province. Victoria, the capital of the province, is on the island of Vancouver. Farther north is Prince Rupert, where the Canadian National Railroad ends. It is a fishing center.

Leading industries. The chief fish caught is the salmon. There are also whaling and halibut fishing grounds near Vancouver and the Queen Charlotte Islands. The fishing grounds on the Pacific side of Canada produce almost as much fish as do the fishing grounds along Canada's Atlantic coast.

The forests of British Columbia produce a third of Canada's lumber. Much of this lumber is made into wood-pulp.

There are many mines in this province that contain valuable deposits of gold, silver, copper, zinc, and lead. About the time of the "'49 Gold Rush" to California, gold was discovered along the Fraser River and in the Caribou district to the north. Later, gold was found in the Klondike and Yukon districts.

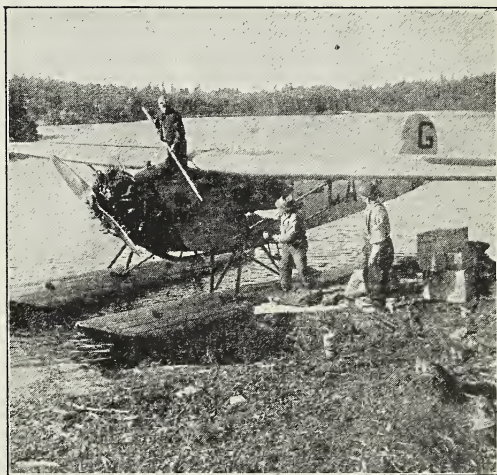
This mountainous region of Canada contains very little farm-land. Here and there in the little river valleys of the southern part are small farms. Hay, potatoes, oats, and a

little wheat are grown. Cattle are kept for dairy products. But there are not enough farms to raise all the food needed for the cities and mines and lumber camps of the province.

How Canada is like the United States. As you traveled westward from the Atlantic to the Pacific, you must have noticed how much Canada is like the United States. In the Eastern region there are fishing communities, farms, and a big industrial section. West of that is a wide stretch of farm-land, then a region of mountains with mines and forests, and then a narrow coast with fisheries but with little industry. Of course, the reason that life in Canada is so much like the life in the United States is that the land itself is similar. The climate, too, is like that of the states which lie to the south of the different provinces. The people, no matter where they came from, have to work at similar tasks and earn their living in much the same way as do the people in the United States.

QUESTIONS TO ANSWER

1. In what ways is Canada like the United States? Think of the geography, climate, people, and crops of the two countries. In what ways are the two coun-



James Sawders

Fig. 616. In parts of northern Canada all supplies must be brought in by airplane.

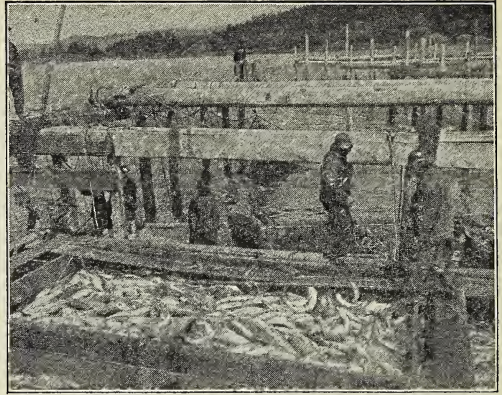
tries different from each other? 2. If you were going to move to Canada, in what part of the country would you want to make your home? Why?

3. Explain why there are many people of French descent in eastern Canada. 4. Can you explain why John Cabot, sailing from England, came to the North American continent, while Columbus, sailing earlier from Spain, landed on the islands of the south Atlantic Ocean? 5. What was the Northwest Passage? Was it ever found?

THINGS TO DO

1. On an outline map of Canada show where the Vikings landed in North America and where the Cabots, Cartier, and Champlain landed and explored. You won't be able to show the exact places, of course, but do it as nearly as possible. 2. Quebec is one of the most interesting cities on the North American continent. Read about its history in an encyclopedia or other reference book at the library. Find pictures of the city and bring them to class. You may be able to find some pictures in travel folders put out by railroad lines which go to Canada.

3. In addition to pictures of Quebec, you can collect enough pictures of Canada in general to make a very interesting picture exhibit. Canada is even larger than the United States and has many different kinds of scenery and many different industries. Find pictures of fishing in Nova Scotia, of lumber camps in British Columbia, of the farming sections, mountains, plains, and Arctic regions. Be sure to find



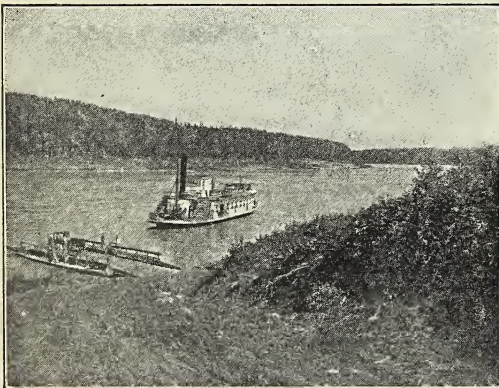
Paul's Photos

Fig. 618. These British Columbia fishermen have just emptied a salmon trap. The traps are located along the shore near the mouths of the rivers.

a picture of Lake Louise in the Canadian Rockies. This beautiful lake is a favorite vacation spot. You may be able to find pictures of Canadian Indians and Eskimos. You can include pictures of the Dionne quintuplets, for they are now one of Canada's most famous attractions. 4. One of the most interesting incidents of the French and Indian War was the taking of Quebec by the English troops. Both Wolfe, the commander of the English, and Montcalm, the commander of the French, were brave and gallant men. Look this story up at the library and make a report to the class.

5. On an outline map of Canada show the industries of the sections as accurately as you can. Remember that there are fishing, mining, farming, and cattle regions. You may be able to think of more industries to locate.

6. Champlain was one of the most interesting of the early French explorers. He not only explored in Canada, but in part of what is now the United States. Write an account of his adventures. You can find something about him on pages 15 to 29 of *The Book of Canada*, by Emily P. Weaver. Other parts of this book may interest you, too. 7. You remember that salmon fishing is an important industry in our state of Washington and in Alaska. It is an important industry of western Canada, too. Read about salmon fishing in *Little Journeys to Alaska and Canada*, by Edith Klingman Kern, pages 57-61, and make a report to the class.



James Sawders

Fig. 617. The Saskatchewan River and other streams in northern Canada are highways for many boats which carry freight to trading-posts and towns.



James Sawders

Fig. 619. Many of the cities in Mexico have large churches built in the Spanish style, like the cathedral in the city of Mexico which you see in this picture. Many other buildings are also built in Spanish style.

OUR SOUTHERN NEIGHBOR MEXICO

The land surface. You know that the western part of our continent is a great highland region made up of the Rocky Mountains and other ranges. These chains of mountains are like a backbone for the continent. They are sometimes called the cordilleran highlands, or the cordilleras.

In Mexico the cordilleras divide into two ranges. One of them is along the east coast, and is called the Sierra Madre Oriental. The other range, the Sierra Madre Occidental, is along the west coast. Between them is a high plateau. In the southern part of the country the two ranges meet.

Some of the mountain peaks are volcanoes. In ages past these volcanoes poured sheets of lava down the mountain slopes. Gradually the lava crumbled into rich soil that has made the central plateau of Mexico a fertile place.

Two-thirds of the people of Mexico live on this central plateau. Find it on the map on page 414. It is the heart of Mexico and always has been.

The Spanish conquest. We know that Indian tribes inhabited Mexico three thousand years ago. And you have read about the Aztecs, who lived in a later period. The Aztecs were Indians who came into power about the year 1300. For two centuries they ruled Mexico. Then Cortez and his Spanish soldiers came and conquered them. Mexico became a colony of Spain.

For more than three centuries Mexico was Spain's richest colony. The Spaniards sent missionaries to the Indians and converted many of them to Christianity. Spanish farmers came and took large tracts of land for themselves. The Indians were taught how to



Fig. 620. Map of Mexico, Central America, and the West Indies

work for their Spanish masters. The people lived in the way people lived in Europe many centuries ago.

The Spaniards built cities with beautiful churches, and they built large, comfortable homes for themselves in the Spanish style. But they let the Indians remain uneducated and poor. Finally, the Mexicans rebelled, and Mexico became an independent republic. Its capital is the city of Mexico, located on the central plateau.

The plateau farms. Two-thirds of the cities of Mexico are on the plateau, which is the center of the farming region. Most of the Mexicans are farmers.

The greatest crop is corn. More than half of the cultivated land is planted in corn. Two and sometimes even three crops can be grown each year on irrigated land. Most of the farmers use the same crude methods of agriculture that have been used for many cen-



Paul's Photos

Fig. 622. At this farm the buildings are grouped around a large courtyard. There is a little church, a store, a smithy, and a fine house for the owner.

tures, although modern methods are now being introduced.

Another large crop consists of beans. Wheat is the third most important crop. But the Mexicans also raise barley, peas, coffee, alfalfa, cotton, tobacco, onions, olives, and figs.

There are thousands of acres of drier lands where there is grass enough for pasture. There the Mexicans raise large herds of cattle. These herds supply the cities with meat and furnish quantities of hides.

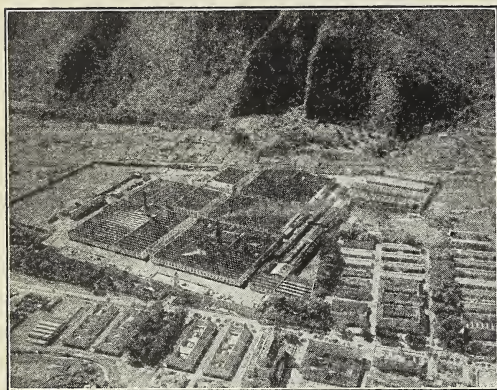
The rich mines. Mexico has a great wealth of minerals. It is the greatest producer of silver in the world. Among all the nations it is second in producing lead, fourth in producing gold, and fifth in producing copper. There are also zinc, tin, mercury, antimony, coal, and iron mines.

There are mines in the highlands as well as in the central plateau. In the Sierra Madre Occidental, to the west, mining is the chief occupation of the people. The eastern highlands, the Sierra Madre Oriental, are especially rich in minerals. A third of the world's silver comes from this region. Some of the mines have been worked for three and four



James Sawders

Fig. 621. There are many market towns in Mexico like this one of San Miguel. The Mexicans bring their produce and wares to these towns in order to sell or trade them for things they want.



Paul's Photos

Fig. 623. Mexico has factory towns, too, such as this one where textiles are made. It is near Orizaba.

hundred years. Centuries ago the Spaniards worked these same mines.

Occupations in the highlands. Here and there in the western highlands are small valleys with a few small farms. There the people grow corn, beans, and peas. They pasture cattle, sheep, and goats on little grassy spots on the mountainsides. The women use the wool for weaving. Lumbering is also carried on in the forests of oaks on the lower slopes and in the pine forests higher up. The timber that is cut has to be hauled out of the forests by mules.

Like the western highlands, the eastern mountains also contain forests. There are cedar, walnut, and ash trees. A great deal of wood is made into charcoal, which the people use for fuel.

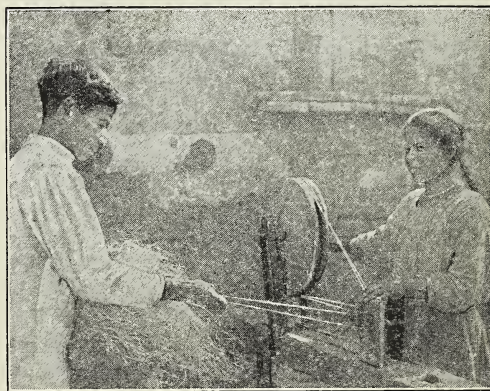
Mining and lumbering are not the only industries in the eastern highlands. In the deep valleys grow vanilla beans. There are also many coffee plantations. In the lower valleys sugar-cane, cotton, and tropical fruits are grown.

The eastern highlands have some towns and some manufacturing. Monterrey, with its iron-works, is called the Pittsburgh of Mexico. In normal times Orizaba imports jute from India and makes it into bags and twine. There are also cotton mills in Orizaba.

Tampico and the oil-fields. Look at the map on page 414 and find the city of Tampico. It is on the coast of the Gulf of Mexico. Tampico is the center and the port for Mexico's oil business. Petroleum was discovered here, and American, Dutch, and English companies drilled wells and built tanks. They employed many Mexicans. Most of the oil has been shipped out of Mexico to markets in the United States and other countries, because Mexico does not use much gasoline or other petroleum products.

Recently the Mexicans decided that foreign companies should not be allowed to ship the oil and mineral wealth of Mexico out of the country. Oil-wells and mines were taken by the Mexicans and are now run by the government.

The tablelands. North of the central plateau is a vast region of tablelands. Scattered through it are broad, gently sloping basins. This land stretches for many miles northward to the borders of Texas and New Mexico. This is a region of cool winters and warm summers. As the land is rather dry, there is little green to be seen. Only cactus, mesquite shrubs, and yellowish-brown grass grow in this dry area. Along the few streams, such as the Rio Grande and the Conchos River, are clusters of cottonwood trees.



James Sawders

Fig. 624. These Mexicans are spinning fiber to make strong twine. Mexico produces a great deal of fiber.



Paul's Photos

Fig. 625. A view in the plateau of Mexico. The lake is Lake Texcoco, and the two old volcanoes you see are Popocatepetl and "the Woman in White."

Few people live in this region which is cattle country. The land was divided into large ranches, called *haciendas*. One of them was as large as our state of Connecticut, although only two thousand people lived on it. Usually each ranch had a large ranch house, a church, and a little village. The workers, or *peons* as they are called, lived in huts around the wells. Many of the large estates have now been broken up.

Cattle, horses, mules, and sheep are an important part of Mexico's exports to the United States. From this region also come quantities of hides.

Of course not much manufacturing is done in such a region. In some of the rural districts and in a few little towns there are small factories. Their chief products are bags, brushes, soap, pottery, and a few other articles. Scattered here and there are a few lead and zinc mines and smelters to handle the ore.

Yucatán. Below the eastern highlands, to the south, is a big peninsula that juts out between the Gulf of Mexico and the Caribbean Sea. This part of Mexico is called Yucatán. Yucatán is a hot, dry country. There are no very high mountains to make the clouds rise

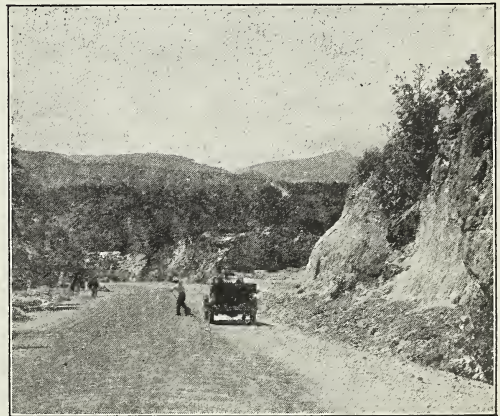
and drop their rain. In such a country the plants and trees are the kind that can stand a dry climate. The main plants are cactus, mesquite, agave, and yucca, all dry and thorny shrubs.

One of these shrubs, the agave, produces the chief wealth of Yucatán. A fiber called *henequen* is made from the leaves of the agave. Henequen is used for making strong twine. The henequen plantations of Yucatán furnish almost all of the twine used for tying bundles of grain. These plantations extend along the coast in a strip about twelve miles wide.

Another important product of Yucatán is chicle. Chicle, which is the gum of a tree, is used in the manufacture of chewing gum.

Explorers looking for groves of the trees from which chicle comes discovered that Yucatán was once the center of a great civilization. Indians called Mayas built cities in the jungles and connected them with roads. Ruins of their large stone temples have been found in several places. Perhaps some day we will know more about these ancient people.

Today the people of Yucatán are mostly Indians. They are noted for their cleanliness. Perhaps they are descendants of the Mayas who lived long ago.



James Sawders

Fig. 626. The Mexicans have built many miles of fine highways to connect their principal cities.

The people of Mexico. You know now that most of the people of Mexico are of Indian blood. But during the many centuries that the Spaniards ruled, many Spanish people married Indians, and so today a large number of the Mexicans are of mixed race. There are many Americans and Europeans in Mexico, too.

Mexico is a land where the Indians have not yet had the opportunities that we have had. Now, however, the Mexican government is trying to send all the children to school. It wants to educate them to make better use of the great resources of their own country.

The lack of transportation. Mexico has been unable to develop her resources because there has been no good transportation. Many of the railroads and highways are poor, although there is a good railroad from the city



The Carnegie Institution

Fig. 628. In the jungles of Yucatán are pyramids and temples built many centuries ago by the Mayas.

of Mexico to Veracruz and a main line to the United States which you can see on the map on page 374. This line has branches to some of the mining and farming districts. But Mexico has no such network of railroads and automobile highways as we have in the United States.

The Mexican Government has completed a motor highway so that travelers from the United States can reach the city of Mexico easily. Later this highway will be extended south through Central and South America. But many of the other roads are rocky trails or jungle paths. As more and more roads are being built, visitors from the United States are becoming better acquainted with this southern neighbor.

QUESTIONS TO ANSWER

1. Why did the Spaniards want to have Mexico for a colony? Why do you suppose the Spanish soldiers were able to conquer the Indians of Mexico so easily? 2. Are most of the inhabitants of Mexico white people? What other peoples do you find in Mexico?

3. What do you think are some of the reasons why Mexico does not use a larger part of the petroleum



Paul's Photos

Fig. 627. This fisherman needs a blanket because the nights are cool on the lakes in the mountains.

produced in the country? Do you think that more of this product will be used in Mexico as time goes on? Why? 4. Why do so few people live on the large haciendas of Mexico? 5. In what ways will more and better railroads and highways help Mexico develop her resources?

THINGS TO DO

1. This section of the text suggests many possibilities for a picture exhibit. In Mexico there are beautiful old Spanish churches and missions, interesting ruins of Aztec and Mayan villages, Indian villages of today, the volcano Popocatepetl, and many other unusual things of great beauty. Less unusual are the oil-fields around Tampico and the large cattle haciendas. You can find many pictures of these in booklets from travel agencies and from railroad and steamship lines.

2. In connection with the picture exhibit described above, plan an exhibit of Mexican products. Some of you may have in your homes Mexican rugs or blankets, pottery, jewelry, hats, or embroidered linen. See how many things of this sort you can collect and



James Sawders

Fig. 630. A tiny island farm near the city of Mexico

put them on a table in your room at school. 3. Oil has played an important part in the recent history of Mexico. You will enjoy knowing more about this industry. Write a brief account of the oil-wells of Mexico. You can find material on pages 301-310 of *North America*, by Lucy Sprague Mitchell.

4. You will like to know something about the life of Mexican children of your own age. If you can find it in your school or public library, read *Pablo and Petra, a Boy and Girl of Mexico*, by Mrs. M. H. Lee. After reading this, discuss in class the ways in which the lives of children in Mexico differ from your life in the United States.

5. The Aztecs of Mexico had a very interesting civilization at the time they were conquered by the Spaniards. Write a theme about them. You can find a good story about an Aztec girl in *Boys and Girls of Discovery Days*, by Carolyn Sherwin Bailey, pages 105-118. You will find parts of *The White Conquerors*, by Munro Kirk, exciting, too. 6. Do you remember, in the section about the Southwest region of the United States, the story of Coronado and his search for the Seven Cities of Cibola? You can read a story about Coronado in *Pueblo Boy*, by C. J. Cannon, and it will tell you more about the Indians of the Southwest at the time of the Spanish Conquest.



Paul's Photos

Fig. 629. Mexican pottery, made and decorated by hand, is offered for sale in many Mexican towns. Such wares are usually made by workmen in their homes.



James Sawders

Fig. 631. There are few railroads in the countries of Central America and the West Indies, and so most of the hauling must be done by teams. The ox teams in this picture are hauling sugar-cane in Cuba.

CENTRAL AMERICA AND THE WEST INDIES LAND OF COFFEE, SUGAR, AND BANANAS

A bridge between two continents. The countries of Central America are crowded into a narrow strip of land. At its widest place this strip is no more than six hundred miles from one ocean to the other. Although in some places it is only fifty miles wide, Central America is a thousand miles long.

Spanish colonies. The early history of Central America is much like that of Mexico. The Mayas who lived in Yucatán and parts of Central America were conquered by the Spaniards. The land was divided into two colonies. One was called Guatemala; the other, farther south, was called New Granada.

The Spaniards built cities in these colonies, and sent missionaries to convert the Indians to Christianity. For centuries this was a Span-

ish land. Early in the nineteenth century the people revolted against the Spanish rule. After this revolt Central America split up into a number of small countries.

Six small republics. There are about as many little countries in Central America as there are separate little basins among the mountains. These small nations are the republics of Guatemala, Honduras, Salvador, Nicaragua, Costa Rica, and Panama. There is also a colony of Great Britain called British Honduras.

Highlands and lowlands. You have read about the Canal Zone and its importance to the United States as well as to the whole world. You know that the canal is built across the "backbone" of Central America.

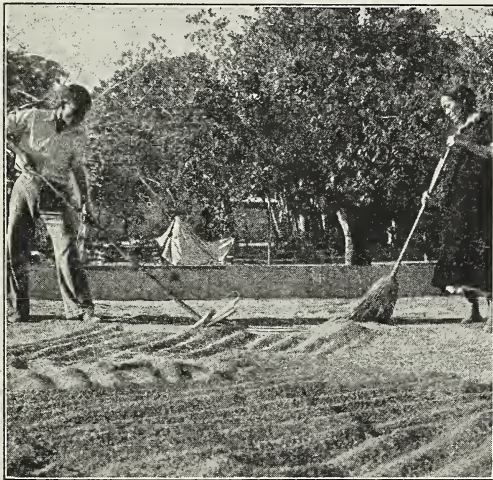
This backbone is a part of the same cordillera highlands that run through Mexico, the United States, Canada, and Alaska.

The highlands in Central America are bordered by lowlands along the coasts of the Caribbean Sea and the Pacific Ocean. In some places along the east coast this coastal plain is wide. But most of Central America is mountainous, with plateaus, ridges, and peaks.

Many of the mountain peaks are volcanoes, most of which are dead, although some are still alive. Some of these peaks are 12,000 feet high. This region has many earthquakes and volcanic eruptions.

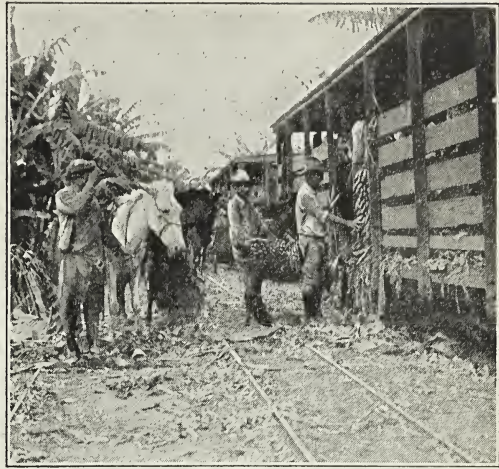
The people. A few Indians live in the valleys and basins among the highlands, but most of them live on the coastal plains. In all of Central America there are about six million people.

The Indians live much as they did in the days when Spaniards ruled them. People from the United States and Europe have established coffee and banana plantations on the coastal plains. As white people cannot



Costa Rica Tourist Agency

Fig. 632. These workers are spreading coffee beans in the sun to dry them. After the berries, or beans, are picked, they must be washed and their smooth silvery skin removed. The beans are dried in the sun before they are sacked and sent to market.



James Sawders

Fig. 633. Loading cars with bananas in Guatemala

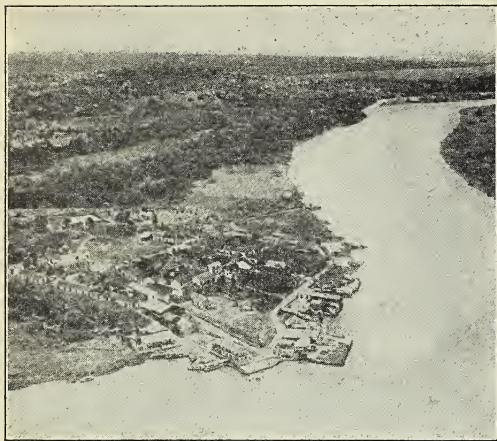
stand hard work in this climate, the plantation owners employ mostly Indians.

The most important crop. Central America is an important coffee-producing region. The coffee plantations ship out a large amount of coffee of fine quality. There are a great many small coffee plantations in the valleys between the highland ridges.

Coffee is the leading crop of Guatemala, Costa Rica, Nicaragua, and Salvador. Salvador is one of the best coffee countries. The lava soil seems just right for the coffee trees. Salvador coffee is the finest quality of all that is produced in the New World. Almost all the Central American coffee is shipped to the United States.

Banana plantations. After coffee, the next most important crop in Nicaragua, Guatemala, and Salvador is bananas. In Honduras and Panama bananas are the chief crop. Honduras grows more bananas than any other country.

The banana plantations are on the eastern coastal plain. Here the soil is very rich, and abundant rains fall. American and European fruit companies use scientific methods to produce the largest possible crop. Their ships run on regular schedules, so that no time is



James Sawders

Fig. 634. The city of San Carlos, Nicaragua

lost when the bananas are ready for shipment to northern markets.

Some other crops. On the lower slopes of the mountains are also sugar-cane, cotton, and tobacco plantations. Here and there are little patches of grasslands where cattle and horses graze. There are also plantations where corn and cacao beans are grown.

Cocoanuts, sisal fiber, sarsaparilla, and chicle are also produced on the coastal plain of Central America. The cities along the coast also ship out some lumber that has been cut in the highlands. This lumber includes fine hardwoods, such as mahogany, ebony, and rosewood. Balsa, lightest of woods, comes from Central and South America.

The countries of Central America have a rich land. Their products of coffee, fruit, and fiber for ropes and twine are in demand all over the world.

QUESTIONS TO ANSWER

1. Find out why there are so many little countries in Central America. 2. How do the products of Central America compare with those of the tropical islands you have studied? 3. What are some of the reasons why the Panama Canal has been important and useful both to the United States and to other countries?

4. Why do you suppose that many of the banana plantations of Central America are owned and oper-

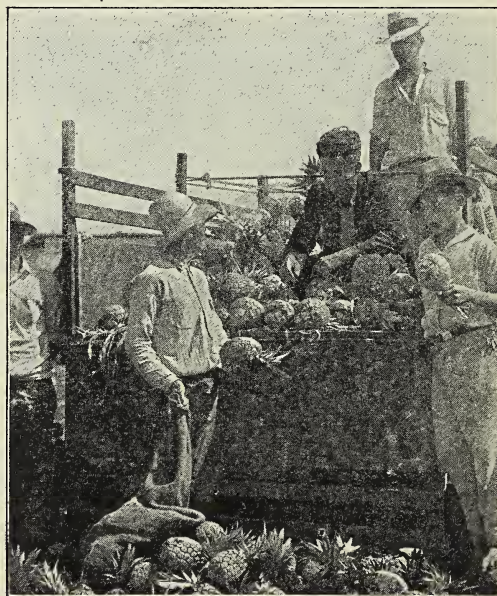
ated by Americans and Europeans rather than by natives of the Central American countries?

THINGS TO DO

1. Fill in the names of the countries on an outline map of Central America and under each name list one or two of the products of that country. 2. You will find it interesting to read, in reference books at the library, about the Mayan Indians who lived in parts of Central America and Mexico in ancient times. Write a report on the Mayans to read to the class, telling what is known about the civilization of these Indians. Illustrate your report with pictures of Mayan ruins.

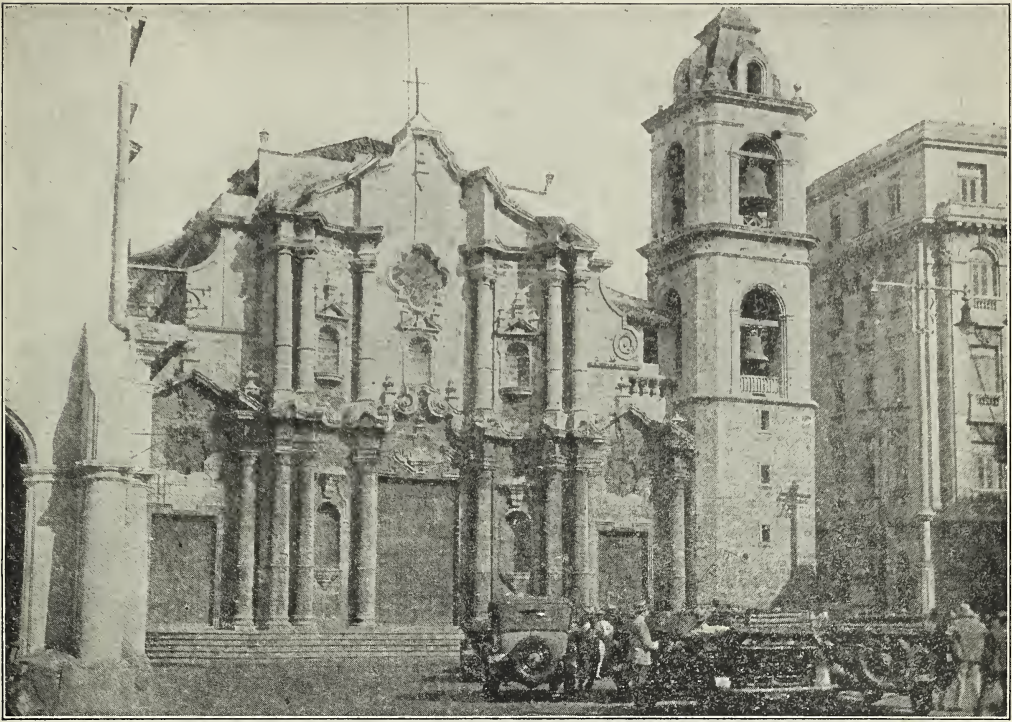
3. You remember that Balboa is called the discoverer of the Pacific Ocean. Just think how exciting that must have been! Maybe your teacher will read you a story about this, called "The Stowaway Who Found a Sea" on pages 92-104 of *Boys and Girls of Discovery Days*, by Carolyn Sherwin Bailey.

4. Bananas are one of the most valuable products of Central America, and one that we appreciate most. Be able to tell something about how bananas are raised and shipped to northern countries. For information on this, read "A Story of Three Children and a Banana" on pages 166-172 of *North America*, by Lucy Sprague Mitchell.



Costa Rica Tourist Agency

Fig. 635. Loading a truck with pineapples



James Sawders

Fig. 636. Compare this picture of the cathedral in Habana, Cuba, with the picture of the cathedral in the city of Mexico which you will find on page 413. Both are built in the Spanish style. In what ways are they alike? This one is called the "Columbus" cathedral.

THE WEST INDIES

Our island neighbors. Lying in the ocean between North and South America are thousands of islands. Most of them are tiny, but some are large. Cuba, which is the largest, is almost the size of our state of Tennessee. The second in size is Haiti, which is about the size of South Carolina.

We call these islands the West Indies, because they were first thought to be close to India and the famous islands of the East Indies. If you look at the map on page 414, you will see that the islands of the West Indies are in three groups. There are the Bahamas, the Greater Antilles, and the Lesser Antilles.

Settlers in the islands. After Columbus returned from his first voyage, hundreds of

Spaniards wanted to get a share of the riches in the new land. Soon the Spanish had settled many of the islands. But other explorers came, too. English, Dutch, and French colonists also settled upon some of the islands in this region.

The Spaniards, who had learned from the Arabs how to make sugar from sugar-cane, discovered that these islands were just right for growing the cane. Other settlers also found this out. Before long the islands were heavily planted with sugar-cane, because Europeans paid good prices for sugar and molasses.

There was one serious drawback, however. The climate was tropical, as you know, and white men could not stand hard work in the heat and dampness of the islands. The Indians refused to work on plantations, and

when forced to labor by the Spanish, thousands of them ran away or died.

Negroes were brought to the New World from tropical Africa to work on the plantations as slaves. That is why more than four million of the six million people who live on the islands today are of Negro blood.

What the islands are like. Some of the islands have thick forests, while others are almost without any trees. Many of the West Indies have well-tilled fields. Almost all the islands are mountainous. Many of the Lesser Antilles are the tops of mountains that lie underneath the water. In the West Indies there is a saying, "One goes to the top of a mountain in a boat." Some of the islands are volcanoes.

Around many of the islands are coral reefs, that help to shelter the harbors. Next to the beaches are coastal plains, sometimes narrow, sometimes wide. Among the hills and peaks of the islands there are fertile little valleys. Most of the people live in these little valleys or along the coastal plain.

When the Spaniards first came, many of these islands were covered with dense tropical forests. Today there are forests only on the



Paul's Photos

Fig. 638. This castle was built for Columbus's son in San Domingo

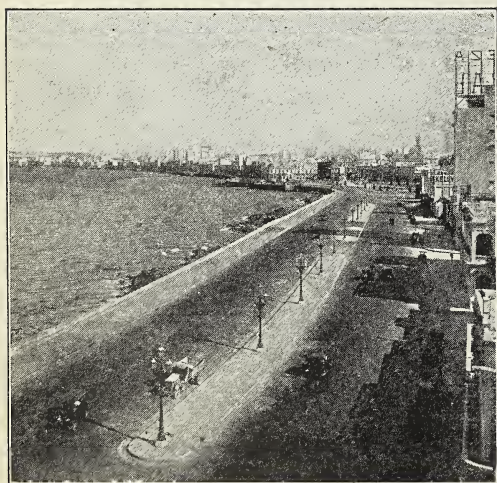
upper slopes. The lower slopes have been cleared for plantations which grow sugarcane, cacao, rice, and tropical fruits. In some of the islands coffee and tobacco are grown on the upper slopes. The eastern part of Cuba is noted for its coffee.

Population of the islands. Some of the islands are crowded with people as you learned when you read about Puerto Rico. Barbados and Jamaica have large populations, considering their size. On some other islands of the West Indies there are only a few people.

Most of the islands belong to Great Britain, but some belong to France and the Netherlands. The United States purchased the Virgin Islands from Denmark in 1917, and has governed Puerto Rico since 1898. The map shows you what countries govern the various islands.

CUBA

The nature of the land. Cuba, the largest of the Greater Antilles, is seven hundred miles long and about one hundred miles wide. Most of the island is a gently rolling plain. When the white men first came, Cuba was covered with forests. Here and there were grassy plains called *savannas*.



Paul's Photos

Fig. 637. Habana, Cuba, is a city with many fine boulevards and modern buildings.

Chief products. When Cuba was a Spanish colony, cattle grazing was important. It is still an important business, but sugar-making is the leading industry today. Cuba produces more sugar than any other country.

The climate in Cuba is just right for raising sugar-cane. There is a long, warm, rainy growing season, and never any frost. There are plenty of people to work in the fields and cane mills. At the present time the harvesting is done with modern machinery. There are good railroads from the plantations to a main line that runs the whole length of the island. This railroad makes connections with many ports along the coast. From these ports fast ships operate between Cuba and the United States. None of the other islands has such good transportation.

Just as in Puerto Rico, there are many plantations growing tropical fruits, such as pineapples, oranges, lemons, grapefruit, bananas, mangoes, guavas, and avocados.

Cuba has mineral resources but they have not yet been developed. There is iron, manganese, copper, and asphalt.

A modern capital. Habana is the principal city and the capital of Cuba. After Cuba



James Sawders

Fig. 640. A sugar-cane field in Barbados and two field hands, or workers, who plant and gather the cane

gained her freedom from Spain, at the time of the Spanish-American War, Habana became a modern city. With American help the Cubans built sewers and wide streets and secured good water supplies. Today Habana is a place where thousands of Americans spend their vacations.

HAITI

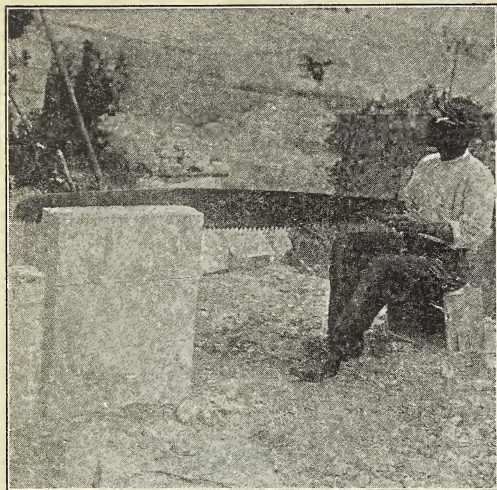
An island divided. Just east of Cuba is the island of Haiti. It is a rugged, mountainous land. The western third of the island is the republic of Haiti, and the eastern two-thirds is the Dominican Republic.

More than three times as many people live in Haiti as live in the Dominican Republic. At least nine-tenths of the people are Negroes. The people of both these republics are almost all Negroes.

The island's story. When Columbus discovered this island, he called it *Hispaniola*, or Little Spain. As you know, the Spaniards brought Negroes from Africa to work on their plantations as slaves. The French took the island from the Spanish and worked the plantations with these slaves for many years.



Fig. 639. There are not many railroads in Cuba, and much of the freight has to be carried in wagons or on the backs of pack animals. This Cuban runs a pack train that carries goods from one of the seaports to small towns in the interior of Cuba.



Paul's Photos

Fig. 641. The coral rock of Bermuda is very soft and can be sawed into building blocks easily.

The language of the people became French. In 1791 the Negroes rebelled and drove the French from the island.

For many years there were wars and revolutions on the island. Then Haiti came under the guardianship of the United States. Roads were built, and streets were paved. Medical officers helped to stamp out disease, and schools were started. Today the people of Haiti are governing themselves.

Haiti's products. Coffee is the chief export of Haiti, but the island also sends out tobacco, cotton, sugar, and cocoa. Some lumbering is done in the forests, and valuable woods are exported.

THE BAHAMAS

What the Bahamas are like. The Bahamas are a chain of islands nearly six hundred miles long. They run from Haiti toward the east coast of Florida. Only twenty of the islands are inhabited, because most of them are very small and rocky.

The first sight Columbus had of the New World was the Bahamas. Probably he landed on the one now called Watling Island. Columbus named it San Salvador.

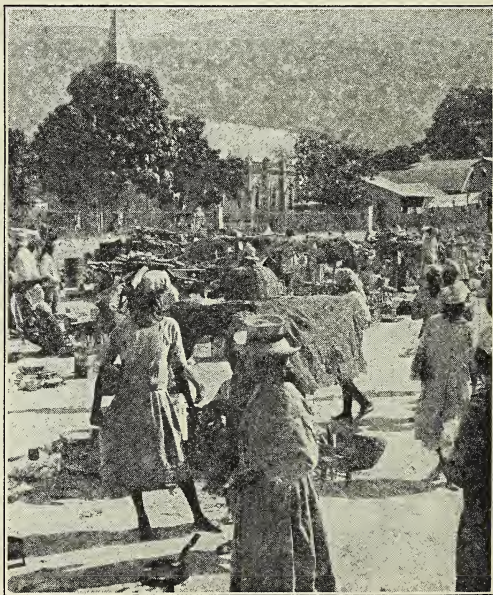
Most of the inhabitants of the Bahamas are Negroes. They speak English, as the Bahamas have belonged to Great Britain for many years. Although there are over three thousand of these islands, only sixty thousand people live on them.

The Bahamas produce sponges, sisal hemp, tomatoes, and pineapples. The climate is so mild and healthful that many people from colder countries spend their vacations on the islands. Nassau, on New Providence Island, is the capital. It is a popular winter resort.

THE LESSER ANTILLES

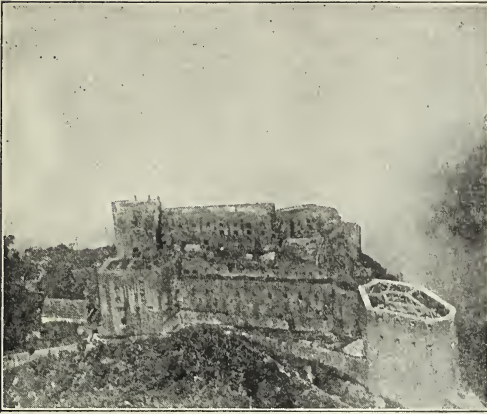
Nutmeg and cacao plantations. Look at the map on page 414 and find the Lesser Antilles. This chain of islands produces great quantities of nutmegs and cacao. The seeds of the cacao tree are removed from their pods and are used in making cocoa and chocolate.

Cacao needs some protection from the hot rays of the sun. Clouds and mists from the



James Sawders

Fig. 642. All kinds of native produce and foods can be found in the market at Port-au-Prince, Haiti



Paul's Photos—Louis Tager

Fig. 643. More than a hundred years ago the Negroes of Haiti drove out their French masters and freed themselves from slavery. One of their leaders, Henri Christophe, made himself king of Haiti. In the mountains he built this enormous castle which is now in ruins. It is called "The Citadel of Christophe."

wet winds drift up the valleys and help protect the tender fruit of the cacao trees on the plantations.

During the few weeks of the harvesting season the natives on the cacao and nutmeg plantations are very busy. But the rest of the year they have little to do except fish and look after their small patches of corn and cassava and their breadfruit trees. The Negroes live in little thatched huts that are plastered over with stucco made from coral.

Here and there in the islands are some very large plantations. These are usually owned by white people, although natives do the work. The larger plantations also produce sugar and rum.

Two important British colonies. Barbados, one of the Lesser Antilles, is an important British colony. The entire island is closely covered with plantations of sugar-cane, tobacco, coffee, and cotton. It is one of the most densely populated of the islands.

Another important British colony is Jamaica, which is about the size of Connecticut. It is a land of beautiful forests and prosperous plantations. Along the coast are the cane

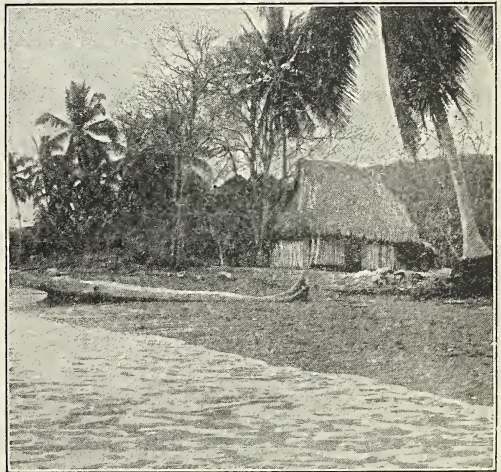
plantations. Farther inland are the farms where coffee, ginger root, allspice, and other spices are grown. These products make Jamaica a valuable colony to the British.

Ways in which the islands are alike. You have read enough about the West Indies to know that the islands are alike in many ways. The soil on most of these islands is fertile, and the climate is warm and moist. Fruits, sugar-cane, coffee, cacao, and spices grow well in the coastal plains and valleys. Most of the islands are mountainous, and many of them have heavy tropical forests.

The people are mostly of Negro blood, but they speak Spanish in some islands, French in others, and English in still others. Some of the islands are independent, while some belong to the United States or to other countries. The people live in much the same way on all the islands because they do about the same things to earn a living.

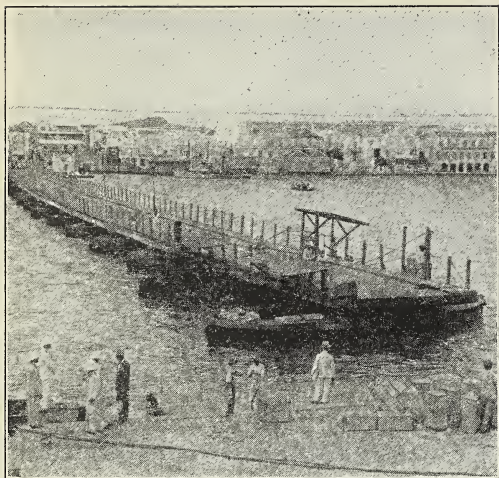
QUESTIONS TO ANSWER

1. Why is Cuba a good vacation land for people of the United States? Give several reasons, remembering the location, climate, and geography of the island. 2. Did the Spaniards find sugar growing in



Paul's Photos

Fig. 644. In clearings along the shores of the Caribbean Sea can be seen many little native huts like the one in this picture. The steep thatched roofs shed the tropical rains.



James Sawders

Fig. 645. At Curaçao, in the Dutch West Indies, the town is reached by means of a drawbridge built on boats. The buildings in the distance do not look Spanish, because these islands were settled by the Dutch and the colonists built stores and homes like the ones they had at home in the Netherlands.

the West Indies when the islands were discovered? How has it come to be such an important crop? Explain why it is that sugar-cane is an important product of several of the tropical islands of the Atlantic and Pacific Oceans.

3. Explain why the people of Haiti are Negroes rather than descendants of the Indians who lived on the island when it was discovered by white men. Why do the inhabitants of some of the islands speak French, and the inhabitants of other islands speak Spanish and English? 4. Would you rather go to Cuba or to the Bahama Islands for a vacation? Give reasons for your answer.

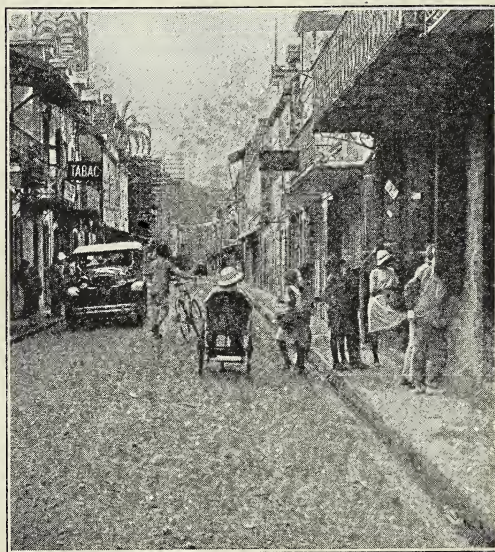
THINGS TO DO

1. On an outline map of the West Indies mark the names of some of the more important islands. At the side of each island, write in small letters the name of the nation to which it belongs. (Some are independent.) Underneath the name of the island write the important crops grown, such as sugar, coffee, cocoa, or bananas. 2. Make a report on how the United States helped in making Habana a modern and healthful city. This is a very interesting story. Your librarian will help you find material on the subject. You may be able to find interesting pictures

of Habana to bring to class and show during your talk.

3. Write a theme discussing the ways in which the islands you have studied resemble each other, even though some of them are located in the Atlantic Ocean and some in the Pacific Ocean. 4. Plan a vacation trip to the West Indies. There are many steamship and airplane lines whose boats and planes stop at the various islands, and they will send you travel folders of their trips. Decide where you want to go and how long you want to stay at each place.

5. Several of you can report to the class on Cuba's most important product, sugar, and on other interesting things about Cuba. There is a discussion of growing sugar-cane on pages 45-52 of *Our Little Cuban Cousin*, by Mary H. Wade. Other parts of that book, and the book *Peeps at Many Lands: Cuba*, by Ford Fairford, will give you many interesting facts about Cuba. 6. Sponge-fishing is one of the most interesting and, to us, unusual ways of earning a living. It is practiced off the coast of Cuba. Write a story about this to read to the class. In preparing it, read "Ranita of Cuba," on pages 254-263 of *North America*, by Lucy Sprague Mitchell.



James Sawders

Fig. 646. If there were many automobiles in Martinique, the town of Fort de France would have a traffic problem. But there are more bicycles than automobiles, and most of the natives walk.



Paul's Photos

Fig. 647. All through South America the traveler finds buildings in the Spanish style. Compare this picture with pictures of buildings in Mexico and in the West Indies. In some parts of the United States there are buildings like these. Can you find out who built some of them?

OUR SISTER CONTINENT

SOUTH AMERICA

How the continents are alike. When you look at the maps on pages 10 and 430 and compare North and South America, you will see that they are alike in several ways. Both continents are broad at the north and taper toward the south.

Each continent has a backbone of mountains. You have read about the cordilleras, the huge chain of mountains that runs through both continents. The Andes Mountains in South America are part of the cordilleras. In both North and South America this chain is close to the Pacific coast.

On the eastern side of North America are the Appalachian highlands. South America also has a separate highland region in the east. It is called the Brazilian Highlands.

In North America there is a great plain between the eastern and western ranges of mountains. This plain is drained by a huge river, the Mississippi. In South America there is also a great plain, and it, also, is drained by a huge river, the Amazon.

How the continents are different. The two continents are different in more ways than they are alike. First, turn to the map on page 4 and notice that South America lies much farther to the east than does North America. Almost all of South America is east of Florida.

The great central plain of North America is a region of farms. The central plain of South America is a huge tropical jungle.

The broadest part of North America is a



Fig. 648. Map of South America



Paul's Photos

Fig. 649. In the northern part of South America are grown such tropical crops as sugar-cane.

land of temperate climate, but the broadest part of South America has a tropical climate. Of course this makes a great difference in the two continents and in the lives of the people.

The narrow southern tip of South America is a cold, barren region. Look at the map on page 414 and decide what the narrow southern end of North America is like.

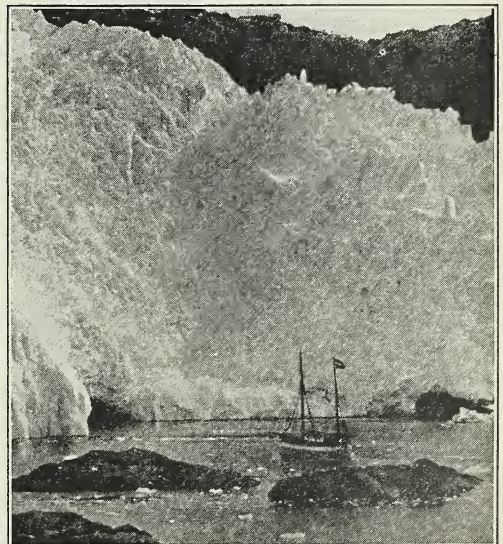
North America is crisscrossed with railroads and highways. But South America lacks such a network. There are railroads, but not enough of them to tie the parts of the continent together as do the railroads of North America. In many places in South America there are no highways at all.

The map shows you another great difference between the two continents. North America has many bays and inlets along its coast. There are hundreds of good harbors. Most of the coast of South America is lacking in harbors. There are a few, of course, but in many places ships cannot find shelter. They must unload their cargoes on to boats that meet the ships a mile or so from shore. However, the southern coast of Chile is indented with inlets and bays like those in Alaska and in Norway.

Peoples of the sister continents. There are just as great differences in the peoples of North and South America. In North America most of the population is white, although there are about twelve million Negroes living on this continent, too. Only in Mexico are there any great numbers of Indians. A large part of South America is occupied by Indians and people of mixed race. As you study each country of the southern continent, you will learn about the people.

Outside of Mexico, most of the people of North America had ancestors that came from the northern countries of Europe. Most of North America was first settled by people from England, Scotland, Ireland, Norway, Sweden, the Netherlands, France, and Germany. But the Europeans who first colonized South America came from Spain and Portugal. They had customs different from those of the northern Europeans, and they had different ways of earning a living.

Exploration of South America. Our story of South America must begin with the Spanish conquerors who first discovered the land.



James Sawders

Fig. 650. At the southern tip are glaciers.



Fig. 651. Mountains, rivers, and valleys of South America



James Sawders

Fig. 652. Parts of the walls built by the Incas before the Spaniards came are used in the houses you see in this picture of a street in Cusco, Peru.

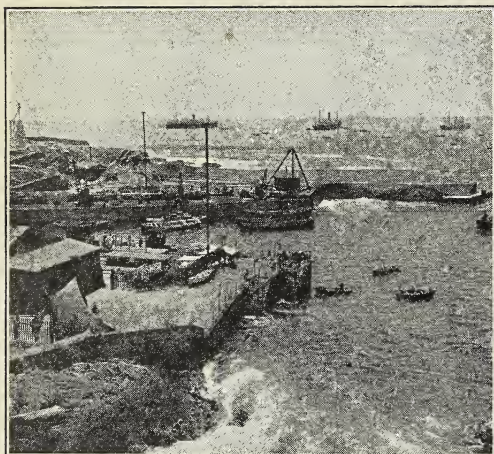
Columbus reached the mainland of South America in the year 1498. He still thought that he had found India or islands near India. Other sea captains followed Columbus. Americus Vesputius described the coast of South America and, as you know, both continents were given his name. In those days Europeans knew more about South America than they did about North America.

Spanish conquerors. You have read how Pizarro heard of the rich mines of Peru and conquered the Incas. The Spaniards spread both north and south from that country. They built cities and established a university. Missionaries came to convert the people, and large churches were built. People in South America were learning European ways long

before many colonies were established in North America.

Most of South America came under Spanish rule, but the Portuguese colonized Brazil. That is why almost all the people in South America speak Spanish, except those in Brazil, where Portuguese is spoken. And that is why these people have many customs that are like the customs of southern Europe.

Independent countries. In 1810 the Spanish colonies began to rebel. One by one the countries became independent. Brazil became a republic, too. Most of the countries decided to have governments like that of the United States. Only three small countries still belong to European countries. Turn to the map on page 430 and find British Guiana, Surinam,



Paul's Photos

Fig. 653. At many ports on the west coast ships must unload at sea because there are no good harbors.

and French Guiana. Some of the islands near the coast, also, "belong to European nations.

QUESTIONS TO ANSWER

1. In what ways are the continents of North and South America alike? In what ways are they different? 2. What are some of the reasons why there are fewer railroads and highways in South America than in North America? 3. In what ways do you suppose the lack of harbors on the South American coast affects the trade of South America with other countries?

4. Why do you think that South America was first settled chiefly by people from southern Europe, and North America chiefly by people from northern Europe? Would it be altogether by accident, or would it be a natural thing to expect? 5. What are the chief languages of South American countries? Explain how the languages came to be used.

THINGS TO DO

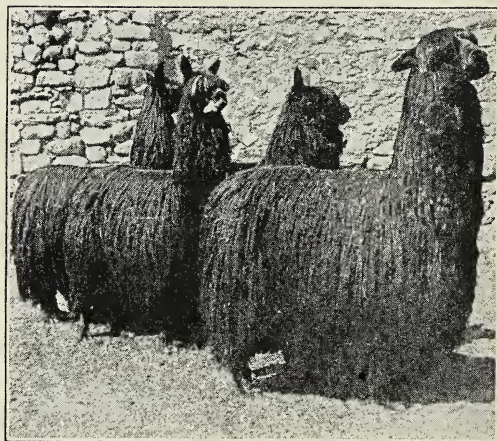
1. South America has as many different kinds of climate and scenery as North America. Look through travel folders, newspapers, and magazines, and bring to class pictures showing as many different parts of South America as possible. You will want pictures of the Amazon River, which is larger than our Mississippi River, of the Andes Mountains, of the wild jungles in the interior of the continent, of the cold regions at the southern tip, and of some of

South America's beautiful cities such as Buenos Aires and Rio de Janeiro. If you can find a wide enough variety of pictures and keep them on a table in your room for a few days to look at from time to time, you will have a better idea of South America than you can get otherwise.

2. Pretend that you are a Spaniard living about 1650 and try to decide whether you will emigrate to North or South America. Think of all the reasons you can for going to either of the two continents, and then make your decision. If several members of the class have different ideas, you can plan an argument which you can rehearse and give before the rest of the class during some class period. Have the class vote on which of you had the best reasons to back up your arguments.

3. Give brief reports in class on the early explorers who came to South America. Include Columbus, Pizarro, Americus Vespucci, and Balboa. You read about these men early in the text, and you can find more information about them at the library.

4. Would you like to read other books telling about South America? Try to find, at your library, *From Panama to Cape Horn*, by Ethel Imogene Salisbury. Keep it on a table in your room, and read parts of it as you study the different countries of South America. Perhaps your teacher will read some of it to the class when there is time. Another book you may enjoy reading is *Twin Travelers in South America*, by Mary H. Wade.



James Sawders

Fig. 654. These alpacas are raised in the Peruvian highlands for their long, silky wool. Have you seen cloth that is made from alpaca wool?



James Sawders

Fig. 655. Colombia does not have many railroads, and so merchandise and products are carried on the rivers. These boats are on the Magdalena River, which you can locate on the map on page 430.

COLOMBIA

A Spanish colony. Colombia is now a republic, named in honor of Columbus, who explored part of the northern coast of South America in 1502. The Spaniards, as you know, were in search of gold and silver, and they found it in the mountains of this country. As a few men with firearms could do what they pleased with the unarmed natives, the Spanish colonists soon had the mines.

For over three hundred years the Spanish ruled in this country, which they called New Granada. They built a walled town on the northern coast, called Cartagena. Soon the Spanish settlements spread down the Pacific coast, and another port, Buenaventura, was built. From these ports were sent shipments of gold, silver, and emeralds.

Some of the Spaniards married native Indians. Negroes from Africa were brought as slaves to work in the mines. And so the population of the country came to be composed of white people, Indians, Negroes, and people of mixed blood, who are called *mestizos*. The

same kinds of people are found in almost every country in South America.

The Republic of Colombia. Colombia's story is like that of most of the South American countries. The people endured the harsh rule of Spaniards for nearly three hundred years. Then they rebelled and gained their independence while Spain was busy fighting a war in Europe.

The hero of Colombia's fight for independence is Simon Bolivar. He formed the Republic of Colombia in 1819. It was larger then than it is now because it included Panama and other territory. Like many other South American countries, Colombia copied the government of the United States, when it became a republic.

Mountains and plains. Look at the map on page 430 and notice that Colombia has both a Caribbean coast and a Pacific coast. See how part of the cordilleras, or Andes Mountains, is divided into three ranges, with river valleys between them. These highland and valley parts of Colombia make up

about two-fifths of the country. Southeast of this region are vast plains, or *llanos*.

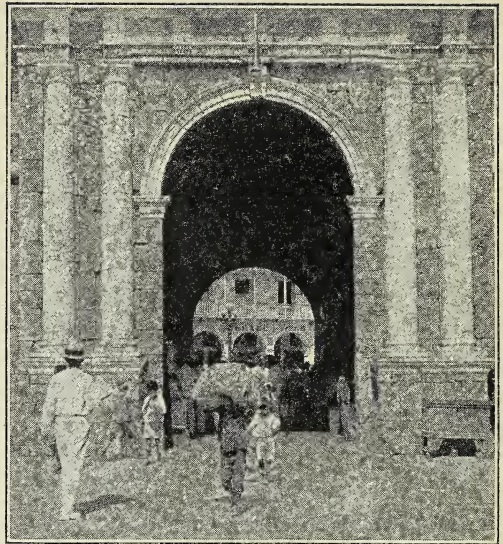
One part of the plains region is grassy, open pasture land. The streams of this pasture land drain into the Orinoco River. The other part of the plains region is covered with immense forests. The streams of this part flow into rivers that empty their waters into the Amazon River.

Most of the people of Colombia live in the highland region. The valleys here are good places for sugar-cane plantations. On the higher slopes are well-kept coffee plantations. Still higher are fields of grain. Even farther up the slopes are good pastures for cattle and sheep.

Colombia's products. Coffee is an important crop in Colombia. The soil and the climate seem to be just right. There is even a fog each day that protects the coffee trees from the intense heat of the noonday sun.

Along the Caribbean coast bananas are grown. Their fine quality is making them a more and more important part of Colombia's exports.

Ever since the discovery of Colombia by the Spanish, mining of gold and silver has been important. There are also platinum and



James Sawders

Fig. 657. Old city gate at Cartagena, Colombia

emerald mines. The mines are in the northern part of the highlands.

Petroleum has been discovered in Colombia and is fast becoming an important export. There are pipe-lines from the oil-fields to the seaports.

In the grassy part of the plains region hundreds of thousands of cattle are pastured. Hides are the important product of this part of Colombia.

The forest region produces mahogany, other hardwoods, and rubber trees. Chiclé, from which chewing-gum is made, and *tagua* nuts, from which buttons are made, also are products of the forest region. Most of the inhabitants of this part of the country are Indians.

The capital of the republic. The capital of Colombia is Bogotá. Although it is not far from the equator, this city has a cool and pleasant climate, because it is on a plateau that is more than a mile and a half above sea-level.

Bogotá is hard to reach, except by airplane, as the country has few railroads. Most of the



James Sawders

Fig. 656. Old and new kinds of transportation on a street in Barranquilla, Colombia

travel in Colombia is by river. The map shows how the rivers connect different parts of the country. The Magdalena is navigable for over 600 miles. The San Juan River, on the Pacific coast, is navigable for 300 miles.

Colombia is about twice as big as the state of Texas, but its population is only two million more than the six million who live in Texas.

QUESTIONS TO ANSWER

1. For whom was the republic of Colombia named? 2. What races of people do you find in Colombia? 3. What would you say is unusual about the coastline of Colombia?

THINGS TO DO

1. Make a list of the chief products and industries of Colombia. Discuss whether each of them is also characteristic of Mexico and Central America. 2. You learned that Bogotá has a cool and pleasant climate although it is near the equator. Discuss the ways in which climate depends upon location with regard to the equator and the height of the land.



Fig. 658. Coffee from the plantations of Ecuador is dumped in the street in Guayaquil, and workmen sack it.

James Sawders



Paul's Photos

Fig. 659. At Quito, in Ecuador, travelers can look down the valley and across the great plateau. You can see the foot-hills of the mountains and the high ranges in the distance with the plateau between.

ECUADOR

Ecuador's history. South of Colombia is the smaller republic of Ecuador. This country was once a part of Spain's colony of New Granada, and it was a part of Colombia until 1830. Its history is much like that of Colombia. The Spanish conquerors occupied the country and forced the natives to work for them.

The climates of Ecuador. Ecuador is the Spanish word for equator. Although the equator crosses the country, the climate is not nearly so hot as you would think because most of Ecuador is a high plateau more than a mile and a half above sea-level. In fact, the climate has been described as "Spring the year round." Along the coast, however, the climate is tropical. In the mountains that surround the plateau, the climate is wintry. East of the mountains the heat and dampness are so severe that only a few Indians can live there.

The republic's resources. On the hot tropical coastal plain are plantations where cacao and coffee are raised. There are trees that



James Sawders

Fig. 660. Although we call them Panama hats, most of the soft straw hats are imported from Ecuador. Girls weave them of fine soft grasses and straw. Most of the workers do the weaving in their homes.

produce large crops of tagua nuts. Tobacco, rice, and fiber for straw hats also are raised here. Ecuador makes thousands of "Panamá" hats.

On the plateau, where the climate is temperate, the farmers grow corn, peas, beans, barley, and alfalfa. This plateau is the place where white people first became acquainted with the potato. The Spanish conquerors found it being grown by the natives and took plants back to Europe.

The forest regions are not developed for lumber, but they produce large supplies of cinchona bark, from which quinine is made. There are tropical hardwoods and rubber trees.

The Spaniards did not find minerals in Ecuador, although today a few places produce gold and silver. Ecuador has deposits of mercury, iron, lead, platinum, and petroleum. These resources have not been developed because of poor transportation.

The need for transportation. The seaport of Ecuador is Guayaquil, which has one of the few harbors on the Pacific coast of South America. A railroad runs from Guayaquil to Quito, the capital, a distance of 300 miles. The whole country has only about one hun-

dred more miles of railroad. Most goods are transported in river boats.

Ecuador owns the Galápagos Islands, which are located in the Pacific Ocean about six hundred miles to the west. Only 500 people live on the islands. When air travel becomes more common, they may be of more importance than they are today.

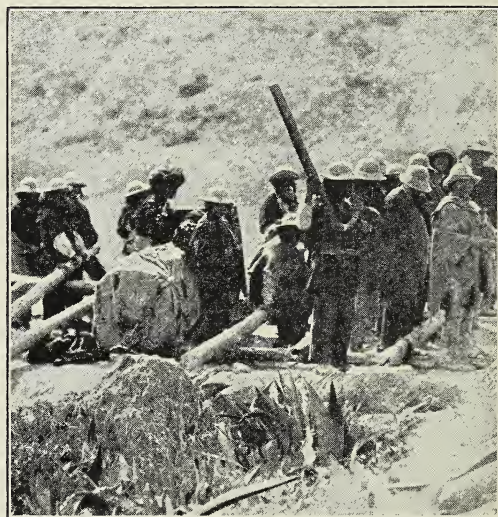
Ecuador is about three times as large as the state of Nevada. Over two million people live in Ecuador, about as many as in Minnesota.

QUESTIONS TO ANSWER

1. What does the name of this country mean?
2. Why is the climate of most of Ecuador so pleasant?

THINGS TO DO

1. Discuss the ways in which Ecuador and Colombia are alike in geography, climate, and crops.
2. If possible, find a Panama hat which was made in Ecuador and bring it to class.



James Sawders

Fig. 661. Transportation is difficult in the mountains of Ecuador. Machinery has to be taken apart, and the pieces carried over the mountains. This group of Indians have been carrying a heavy load. They will rest for four minutes while the Indian with a tuba plays a tune for them. Then they will pick up the load and carry it for four minutes.



James Sawders

Fig. 662. Arequipa, Peru, lies at the foot of a beautiful mountain called El Misti. Can you find out why this mountain, which you can see in the picture, is sometimes called the Fujiyama of South America?

PERU

Natural regions of Peru. Peru lies south of Ecuador. Like Ecuador, it is one of the countries in the cordilleran highlands. Like Ecuador, too, Peru can be divided into strips of different kinds of land with different climates. There is a coastal plain, from twenty to thirty miles wide. Then there is the region that consists of valleys high in the mountains. On the eastern slope of the mountains is a region of rivers and forests.

The coastal plains of tropical lands are usually covered with trees and shrubs, and so the traveler is surprised to find that most of Peru's coastal plain is a dry and barren strip of land. It is treeless, for rain rarely falls in this region. A cold ocean current from the Antarctic, called the Peru, or Humboldt, Current, sweeps along this coast. The cool air over this cold water helps to keep rain away

from the coast. But there are many fogs and heavy mists.

Some parts of the coastal plain, however, are not a desert. For the plain is crossed by many mountain streams that come through small valleys from the Andes. Each of these little valleys is fertile. The mountain streams are used to irrigate the land, and the rich valley soil produces good crops of cotton, rice, sugar, and fruits.

Peru's cities. Along this strip of coast land, 1400 miles long, are most of the cities of Peru. There is Lima, the capital, with its seaport, Callao. And in the south is Arequipa, with its port, Mollendo. In the north is Paíta, the seaport used by tank-steamers which export the petroleum that is found in northern Peru.

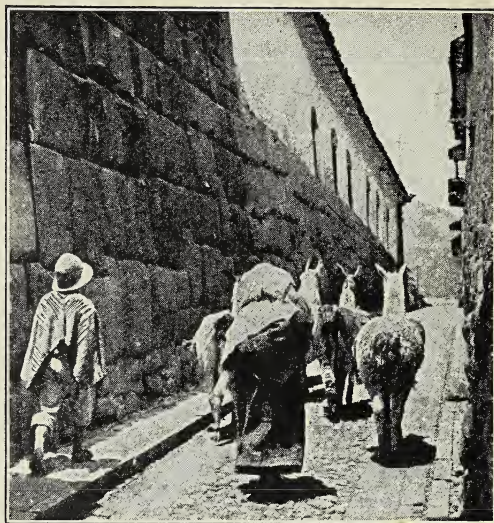
The few railroads in Peru are short ones and are not connected into a single system. The most important railroad runs from the

seacoast to Arequipa, where there are cotton-mills, flour-mills, factories that make cocoa and chocolate, and factories that make leather goods. From Arequipa this road runs to the highlands where it connects with another line.

Occupations of the people. In the highlands the people live and farm in about the same way as they did when the Spaniards came centuries ago. Many of the valleys are fertile, but the slopes are so steep that they must be terraced before they can be farmed. The Peruvian Indians have known for many centuries how to terrace their hillside farms.

The Indians of the highland valleys raise crops of corn, wheat, barley, potatoes, and alfalfa. They also raise *coca*, a shrub from whose leaves a drug called cocaine is made. On the higher slopes are grazing lands, where alpacas and llamas are raised. The llama is used as a beast of burden. The alpaca and llama furnish wool for making clothing and for export.

The Spanish conquerors worked the gold and silver mines of Peru with native labor. Today foreign companies are working copper mines with native labor, and produce more wealth than the gold and silver mines ever



Paul's Photos

Fig. 664. Llamas in a street of Cusco, Peru

did. But the petroleum wells are now Peru's most valuable natural resource.

Historical cities. In the southern highlands of Peru are the ruins of the old Inca cities. When the Spaniards came, Cusco was the chief city of the Indians. Visitors are always amazed at the stonework of the Indian builders of olden times. In the mountains are ruins of other ancient cities.

In 1535 Pizarro founded the city of Lima, and it became the principal Spanish city of the New World. The University of San Marcos, founded in 1551, is the oldest university in the New World.

East of the mountains. The inhabitants of the *montaña*, the land on the east side of the Andes, are Indians. Rivers are the only means of transportation in this region. Thick forests grow here because there is an abundance of rainfall. The soil is so fertile that almost anything can be raised with little trouble. But this region has not yet been much developed. Peru's wealthiest region is still the narrow strip along the coast.

From colony to republic. The Spaniards ruled Peru from the time of Pizarro's con-



Fig. 663. You can see by this map that most of Peru is mountainous. East of the mountains, next to Brazil, is a large region that is a part of the great valley of the Amazon River. Why is it difficult to reach?

quest until 1821. Like the other countries of South America, Peru is now a republic. More than half of the people are Indians who live in the highlands. But the government is in the hands of a few wealthy people who live in the coastal cities.

Peru is more than ten times larger than Ohio, but has about the same population.

QUESTIONS TO ANSWER

1. In what way is the geography and climate of Peru like that of the South American countries you have already studied?

2. Explain why the strip of land along the coast of Peru is the wealthiest region of that country.

THINGS TO DO

1. Two unusual animals are spoken of in this section. They are the alpaca and the llama. Have you ever seen either of these animals? Try to find pictures of them to bring to class. If you cannot find pictures in travel books about South America, try the dictionary or encyclopedia. 2. Review the story of Pizarro's conquest of Peru, giving the reasons why this colony was important to Spain.

3. The Inca ruins of Peru are very interesting to see. Find pictures of ruins of old Inca cities and make a report on the civilization of the Incas at the time of the Spanish Conquest. You will find books in the library helpful in preparing your report. Read pages 153-175 of *From Panama to Cape Horn*, by Ethel Imogene Salisbury, and pages 161-175 of *South America*, by Isaiah Bowman.



James Sawders

Fig. 665. Near Cusco, Peru, is the ancient city of Macchu Picchu. The stonework in this city is not so regular and perfect as in the Inca buildings of Cusco. Can you find the long stairway that leads to one of the streets? Notice the terraces on the hillside, all carefully walled with stone. This city was forgotten for many centuries and was discovered only about thirty years ago.



James Sawders

Fig. 666. These Indians of Bolivia are harvesting a crop of what we call "Irish" potatoes. But we ought to call them Bolivian potatoes, for the plateau of Bolivia and Peru is the original home of the potato.

BOLIVIA

Another highland country. High in the mountains, at the southern end of Peru is South America's largest lake, Titicaca. It is the highest large lake in the world, as it is 12,000 feet above sea-level. Lake Titicaca lies partly in Peru and partly in the large inland republic of Bolivia.

Bolivia is a plateau country in the highest part of the Andes. Look at the map on page 430 and find the equator and the line marked Tropic of Capricorn. Notice that Bolivia lies between the Tropic of Capricorn and the equator. Instead of being hot and damp like many tropical lands, this plateau is cold and dry.

The mines of Bolivia. For more than four hundred years the silver mines of Bolivia have been worked. The richest of them are at Potosí, high in the Andes. At Potosí there is a frost almost every night of the year.

Bolivia also has tin mines that produce about one-fourth of the world's supply of tin. Many of the mines are located high in the mountains and are so hard to reach that the ore is carried out on the backs of llamas.

Bolivia also has deposits of copper, tungsten, and other metals. It is believed to be rich in petroleum, too. But much of Bolivia's mineral wealth is untouched because transportation is difficult.

Transportation in Bolivia. Although Bolivia is as large as the part of the United States that is south of the Ohio River and east of the Mississippi, there are only fifteen hundred miles of railroad. And Bolivia is an inland country having no seaports at all.

On the plateau. The plateau region is too cold and too dry for crops. The Indians raise a few hardy potatoes and a little barley, but most of the food must be brought in. There is scanty pasture for llamas, alpacas, vicuñas, and guanacos. These animals belong to the

camel family, although they are much smaller than the camel of Asia. Their hair is valuable, and quantities of it are sent out from Bolivia every year.

The eastern slope. East of the mountains Bolivia is a fertile land. The slopes of the mountains are covered with forests, and there are stretches of grassy pasture land. The many little valleys contain farms where Indians raise corn, wheat, beans, and rice. There are fruit orchards and groves of coffee and cacao trees.

Where the mountains slope downward toward the east, the climate is different. Half-way down the mountain slope the climate is temperate, but in the lowlands the climate is tropical. In the wet lowlands are many rubber plantations.

Another country of mixed peoples. More than half the three million people of Bolivia are Indians, and only about one-tenth are white. The others are of mixed blood. As the country was a part of Peru under Spanish rule, the language and customs are much the



James Sawders

Fig. 668. A Bolivian Indian and his llama

same as those of Peru. The educated people speak Spanish, while the Indians use their own languages.

History of Bolivia. The Bolivians have had a republic since 1825, when Simon Bolivar led the colonies in a revolt against Spain. The republic was named Bolivia in honor of Bolivar.

Bolivia once had part of the coastline along the Pacific, but lost it to the republic of Chile. In the southeast corner of the country is a region called El Chaco, which is claimed both by Bolivia and by the neighboring inland republic of Paraguay.

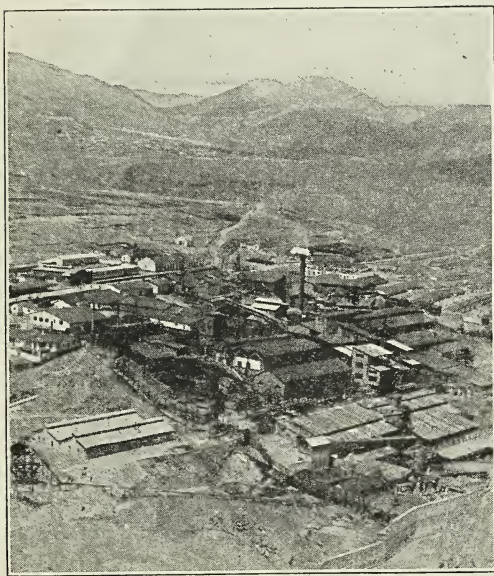
Bolivia has two capitals. Sucre is the first capital, but the government has most of its offices in La Paz.

QUESTIONS TO ANSWER

1. Explain why it is that much of Bolivia's mineral wealth is untouched.
2. Why are the language and customs of Bolivia so much like those of Peru?
3. Can you think of any reasons why Bolivia would like to own a strip of land along the coast?

THINGS TO DO

1. In studying Peru, you learned of two animals that are common there which are unfamiliar to us in the United States, the alpaca and the llama. In addition to these two, the vicuña and the guanaco



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Fig. 667. A modern smelter in Bolivia, where tin is refined and shipped out to other countries.



James Sawders

Fig. 669. A part of the region around the lakes of Chile was settled by German farmers. They built houses like the ones they had at home in Europe. That is why the building you see in this picture does not look like buildings of Spanish style in most of the other pictures of South America.

are mentioned in this section. If possible, find pictures of these last two and bring them to class. You can plan a very interesting picture collection showing animals and reptiles of South America.

2. You learned that Bolivia was given that name in honor of Simon Bolivar, who helped that country win freedom from Spain. Not only Bolivia, but also Colombia, Ecuador, Peru, Panama, and Venezuela owe their freedom to Bolivar. Your librarian will help you find material for written reports on the life of this man who holds in the history of South America somewhat the same place that George Washington does in the history of the United States. Perhaps your teacher will read some of the reports to the class.

3. Explain why the location of the Amazon makes it less useful than the Mississippi.

CHILE

The coastal republic. Chile is another South American republic in the cordilleran highlands. It is a long, narrow country, not more than two hundred fifty miles wide, but about twenty-five hundred miles long. If you could place this strip of land on the map of North America, it would reach from the city of Mexico to Hudson Bay.

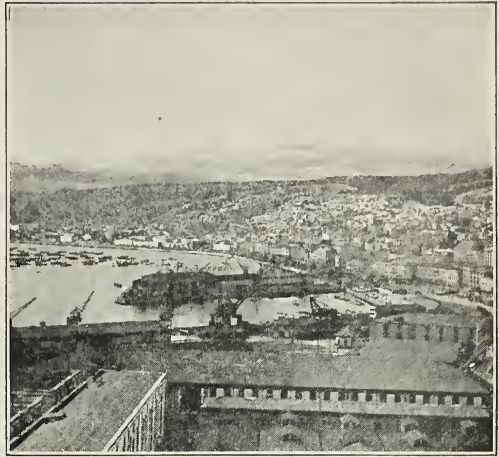
Kinds of climate. You know that there are many kinds of climate in the land between Hudson Bay and the city of Mexico. And there are almost as many different kinds of climate in Chile. At the north, in the tropics, is the Atacama Desert. In the south is a

rugged, forested region. Along the coast are hundreds of wooded islands and inlets. The coastline is like parts of the coasts of Alaska or Norway.

Between mountain-ranges. The central part of Chile, called the Middle Valley, is about seven hundred miles long and thirty miles wide. It is not a coastal plain, but a valley that lies between the low coastal mountains and the higher ranges of the Andes. Nine-tenths of the people of Chile live in this middle valley, where the temperature rarely goes below freezing or above eighty degrees.

In the southern part of the middle valley there is plenty of rainfall. In the northern section abundant water for irrigation comes from mountain streams.

The land of the middle valley is divided into many small valleys. Some of the farms, or *haciendas*, are large and occupy all of one small valley. On these farms corn and wheat are raised. There are grassy pastures in the valleys and good grazing lands in the moun-



James Sawders

Fig. 671. Valparaíso, Chile, is one of the few cities on the west coast of South America that has a good harbor. Valparaíso is a busy port.

tains for the large herds of cattle, sheep, and horses.

The valleys produce more fruit than the people can use. Great quantities of dried and canned fruit are shipped from Valparaíso to the markets of the world. Other valley crops are oats, potatoes, tobacco, and sugar-beets.

Wealth in the barren region. The barren northern section of Chile, the Atacama Desert, produces so much wealth that it is called the "pocket-book" of Chile. A few feet under the surface of the desert are huge beds of nitrates, a kind of fertilizer. Shipping nitrates is the biggest business of Chile. This kind of fertilizer can now be manufactured in other countries, and Chile is losing some of the trade in nitrates. But the seaports of Iquique and Antofagasta in this region are still busy with their export trade.

The Alaska of the South. The southern coast of Chile is very much like Alaska. The soil is fertile, and there are huge forests. Not much timber is cut, however, because there are few sawmills and almost no means of transportation. In the mountains there are ranches where sheep are raised. The wool

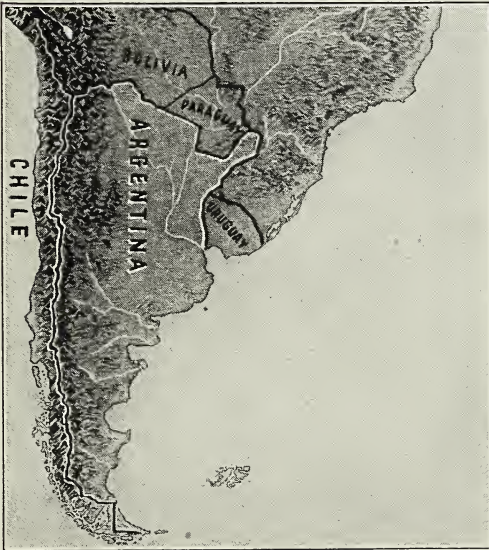


Fig. 670. Compare this map with the one on page 430. About where is the Middle Valley? Notice how much of Chile is mountainous land and how little is lowland.

is sent to the port of Magallanes for shipment. Fishermen make a scanty living in the inlets. No valuable fish like the salmon of Alaska bring them wealth.

At the tip of the South American continent, across the Strait of Magellan, is a group of islands known as Tierra del Fuego, or Land of Fire. Chile owns some of them. The only occupation here is raising sheep.

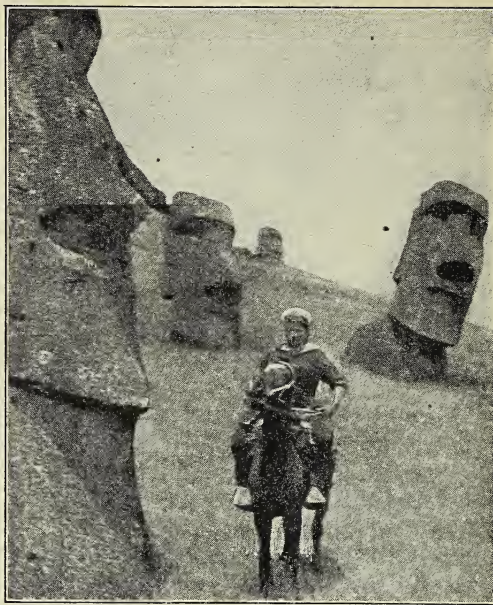
Chile also owns some other interesting islands. One group, the Juan Fernández Islands, lies four hundred miles out in the Pacific Ocean. It was here that Alexander Selkirk spent four solitary years. He is supposed to have been the hero in the famous story, *Robinson Crusoe*. Another island is Easter Island, that lies two thousand miles out in the Pacific. On this island are rows of huge carved stone images. No one knows who carved them.

History of another republic. The Spaniards began the conquest of Chile in 1535. In 1540 the city of Santiago was founded. It is still the capital. Like other South American countries, Chile was ruled by the Spaniards until the early part of the nineteenth century. Under General O'Higgins the people became independent of Spain in 1818.



James Sawders

Fig. 672. Some of the hills of Valparaíso are so steep that elevators have been built for the people.



James Sawders

Fig. 673. The people who carved these stone images on Easter Island disappeared many years ago. No one knows where they came from or where they went.

The Chileans are sometimes called the "Yankees of South America." They are energetic, perhaps because they live in a temperate climate. There are more people of European blood in Chile than in most of the other South American countries. Many of the large landowners of the valley section are of German, Dutch, Spanish, and Italian descent. In the south many of the sheep-ranchers are Scottish, English, Welsh, or German.

The country has a government somewhat like that of the United States. However, a citizen must be able to read and write in order to vote. As only about three-fifths of the four million people can read and write, many people have no vote. But there are public schools now in all the towns, and education in them is free.

QUESTIONS TO ANSWER

1. Look at a map of South America. What strikes you as the most unusual thing about the shape of Chile? 2. Explain why there are so many varieties



James Sawders

Fig. 674. These rough peaks are at the southern end of the Andes range in Chile.

of climate in Chile. 3. Why is the Desert of Atacama in the northern section of Chile called the "pocket-book" of Chile?

4. What are the chief industries and crops of Chile? Are they like those of the other South American countries you have studied? 5. Why do you suppose that there are more people of European blood in Chile than in most of the other South American countries?

6. Do you think it is a good thing for people to have to be able to read and write in order to vote? Try to think of reasons on both sides of the question. 7. What reasons can you give for the fact that nine-tenths of the people of Chile live in the Middle Valley?

THINGS TO DO

1. The carved stones on Easter Island are very interesting, but no one knows anything about who

carved them. See if you can find some pictures of these odd images in travel books at the library. Bring them to class. 2. Discuss the ways in which the southern coast of Chile is like the coast of Alaska.

3. On a map of Chile, show where the different sections of the country are, marking down the chief characteristic of the climate of each section and the chief crops or industries of each section. 4. Make a short report on General O'Higgins, who won independence from Spain for Chile as Bolivar did for others of the South American countries. You can find material for the report in books at the library.

5. You all know the story of *Robinson Crusoe*. This would be a good time to reread parts of it. Look up the story of the life of Alexander Selkirk and make a report to the class. It was from this man's life that Defoe got the idea for his famous book.



James Sawders

Fig. 675. On the grazing plains of Argentina are many large herds of beef cattle.

ARGENTINA

A country of three regions. The large and important republic of Argentina can be divided into three parts. Look at the map on page 430 and find the first of these regions in the north. It is marked El Chaco. This is a low plain with dense forests. It is drained by the Plata River and its tributaries. Then find the Negro River on the map. South of this river are the plains of Patagonia, as this second part of Argentina is called.

Between the Plata and the Negro Rivers is the third region, a vast stretch of prairie land called the *pampas*. The majority of the people of Argentina live there for this is one of the finest farming regions in the world.

A land of farms. A large percentage of the people in Argentina are farmers. Most of the people are engaged in the business of raising food. The others work in meat-packing plants, flour-mills, and a few factories where cloth, shoes, hats, and glass are made.

The prairie region is divided into great

cattle and grain ranches. The land is owned by a few very wealthy people, and there are not many small farms. Some of the ranches contain a hundred square miles or more.

Workers on the pampas. It takes thousands of laborers to tend the herds and fields of the pampas. In normal years many Italians and Spaniards came from Europe to work during harvest. Since these workers came and went each year, they were called *golondrinas*, the Spanish word for swallows.

Marketing the grain and cattle. The grain is moved to the railroads in large two-wheeled carts. Unlike other South American countries, Argentina has good transportation. Railroads connect the grain region and the cattle country with the ports of Buenos Aires, Rosario, La Plata, and Bahía Blanca.

The grain of Argentina reaches the markets of the northern world at a time when the supply is running low. This is because the seasons south of the equator are just the opposite of seasons north of the equator.



James Sawders

Fig. 676. A jungle home in Argentina. In the distance you can see the framework of another house before the natives have thatched it.

South American grain is ready for harvest when United States grain is just starting to grow.

The cattle district is also prosperous, and meat from Argentina is carried in refrigerator ships to northern markets at all seasons of the year.

The capital of Argentina. Buenos Aires, the capital of Argentina, has a population of about two and one-half million. New York and Chicago are the only larger cities in the New World. It is the chief port of the pampas region. Travelers return from Buenos Aires and say that it is a city of beautiful buildings and splendid boulevards.

Patagonia. The region known as Patagonia is rather dry. Of course, it is colder than regions farther north. The land is not very productive. Sheep-raising is the chief occupation. Very few of the Patagonian Indians who once roamed over this country are left. But since petroleum has been found in the region around Comodoro Rivadavia, this sec-

tion may become important to the country, as coal is scarce in Argentina.

Other products of Argentina. Along the eastern slopes of the Andes Mountains are many forests. As the country develops, the timber will be of great value to the people living on the pampas, where there are almost no trees.

The region called El Chaco also has some farms where corn is grown and cattle are raised. But this is chiefly a forest region. Timber from the *quebracho* trees is the chief export. Quebracho wood is so hard that it makes especially good railroad ties and paving blocks. Chips of this wood are also used in tanning leather.

In one part of the Chaco region sugarcane is grown. Farther west, in the foothills of the mountains, there is a region where grapes and other fruits grow well. Mountain streams supply enough water for irrigation.

Just south of Buenos Aires is a district where flax is an important crop. Nearly half of the world's supply of flaxseed for making linseed-oil comes from Argentina, or "the Argentine," as this country is often called.

The Spanish in Argentina. Argentina's history is like that of the countries along the western coast of South America. Sebastian Cabot, son of John Cabot, was one of the first Europeans to visit the country. A Spanish



James Sawders

Fig. 677. Modern tractors with gang plows break up the land on the pampas and prepare it for crops.



James Sawders

Fig. 678. From the docks of Buenos Aires grain and beef are shipped to markets in many countries.

noble founded a colony where Buenos Aires now stands, but the Indians destroyed it. The Spaniards had brought horses with them, and these were the ancestors of the herds of wild horses that roamed the pampas for many years.

Before 1600 the Spaniards had founded more colonies and had begun to spread over the country. They ruled Argentina until 1816, when the people won their independence. The long Spanish rule accounts for the fact that the people speak Spanish and have many Spanish customs.

The people of Argentina. There are more white people in Argentina than in any other South American country. There are only about 10,000 Indians, and 100,000 *mestizos*. The rest of the population of more than 11,000,000 are of Spanish, Italian, British, and German ancestry. More of the people know how to read and write than in any other country of South America.

QUESTIONS TO ANSWER

1. Why are most of the people of Argentina farmers?
2. What is the season in Argentina at Christmas? Why is this?

THINGS TO DO

1. On an outline map of Argentina show the forest region, the farming regions, the cattle and sheep country, and the regions where grain and flax are grown. 2. Argentina is one of the most important countries in the world in the production of cattle for meat. Where in our country are large cattle ranches? Have you ever visited a packing-house? If you live near one, perhaps your teacher will arrange a visit for the class.

3. The United States and Argentina are both very important in wheat production for the whole world. Ask the librarian at your school or public library to help you find figures in the *World Almanac* which show the amount of wheat produced in the two countries. Copy the most recent figures given for both countries and bring them to class. 4. Buenos Aires is a beautiful city. Try to find pictures of the city to bring to class.



James Sawders

Fig. 679. Montevideo is an up-to-date city as you can see by these modern houses in one of the suburbs. Most of the South American cities have many fine new buildings and extensive parks.

URUGUAY AND PARAGUAY

The republic of Uruguay. Across the Plata River, north of Argentina, is the small republic of Uruguay. It is one of the smallest of the South American republics.

Uruguay, which is about the size of the state of Oklahoma, is like a huge cattle ranch. The grass grows well all the year round, for the climate is mild and rain is usually abundant.

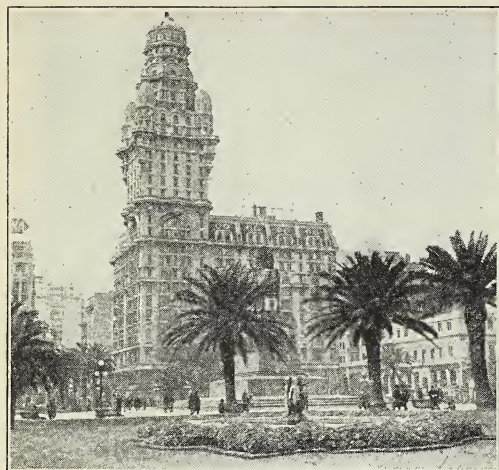
More than four-fifths of Uruguay is used for cattle- and sheep-raising, while less than one-tenth of the land is used for growing crops. The chief crops are wheat, flax, corn, and tobacco, but they make up only a small part of what Uruguay sells to other nations.

The rest comes from the ranches and consists of hides, beef, wool, and mutton.

Uruguay's capital city. The only large town is Montevideo. It is a beautiful modern city with fine boulevards and buildings. And it is one of the most healthful cities in all the world. It is the railroad center, the chief port, and the capital of this small nation.

The people and their history. The people of Uruguay are chiefly of Spanish and of Italian descent. Most of the first settlers of Uruguay came from the Canary Islands. Less than one-tenth of the two million people are of Indian or of mixed blood.

Uruguay fought two wars of independence. They won a war against Spain in 1825, and later fought to free themselves from the Por-



James Sawders

Fig. 680. This skyscraper with its odd tower overlooks the main plaza of Montevideo, Uruguay.

tuguese rulers of Brazil, about whom you will read later.

The republic of Paraguay. Paraguay, which is a small inland country, is only about as large as the state of Missouri.

Paraguay is a land of dense forests and of fertile valleys. There are groves of fruit trees, especially orange trees, and farms that raise grain, cotton, sugar-cane, and tobacco.

Paraguay sends out a few unusual products to South American and other countries. The people gather *yerba mate*, or Paraguayan tea, which is a favorite drink in many South American countries. They raise an enormous crop of oranges, and export an oil made from orange leaves.

The capital of Paraguay is Asunción, which is on the Paraguay River. It was founded in 1535 by a Spaniard who was seeking a way to Peru from the east coast. The people rebelled against Spain in 1811 but were ruled by dictators for many years.

Most of the Paraguayans are of Indian blood, and there are probably fewer white citizens there than in any other South American country. More people in Paraguay speak the Indian language than Spanish. As yet,

Paraguay has not many schools, and in other ways the country is not well developed.

QUESTIONS TO ANSWER

1. Can you think of any reasons why there are so many more Indians among the inhabitants of the South American countries than there are among the inhabitants of the United States and Canada? 2. In what ways are the crops of many South American countries you have studied alike? In what way is the geography of the countries alike? The climate? The people? 3. Explain why the country of Uruguay is good for cattle raising.

THINGS TO DO

1. Find some pictures of cattle and sheep ranches in the western part of the United States and in South America. Does the country look alike in both? Do the workers look alike?

2. Begin to work on an exhibit of South American products, in connection with a picture collection showing cities, districts, and peoples of South America. You can probably find South American coffee, as most of our coffee comes from Brazil. Perhaps you can find other South American foods, such as sugar, nuts, and fruits; or maybe you can find a piece of South American rubber or some thing that Indians have made.



Ewing Galloway

Fig. 681. The workman is cutting branches of leaves from which *yerba mate*, or Paraguayan tea, will be made. Some of the supply comes from wild trees.



Paul's Photos

Fig. 682. A great statue of Jesus, with arms outstretched, looks down over the city of Rio de Janeiro. The picture shows how the city is built at the foot of the mountains around the great harbor.

BRAZIL

The largest country in the Americas. Brazil, the largest of the South American countries, is larger than the United States. Almost half of South America lies within its borders.

The map on page 454 shows that Brazil is made up of two quite different regions. In the south and east is a plateau land with many mountains and small valleys. In the north and west is the huge valley of the Amazon River. These two parts of the country are different in climate and in resources.

Southern Brazil. One of the busiest and most important parts of the country is southern Brazil. Here are many European settlers. They enjoy a healthful climate, fertile soils, and good transportation.

There is a great deal of pine timber in the mountains of this southern region. Such soft

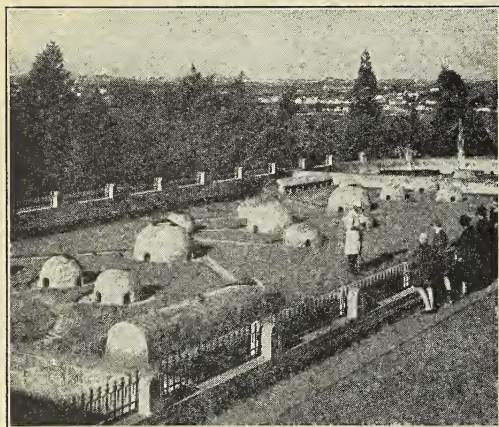
wood is valuable in South America, since the wood of most tropical trees is too hard for use in building.

The climate in the southern part of Brazil is temperate, and many different crops are grown on the farms. There are also large pasture lands where herds of cattle graze.

The central plateau. North of this region is the central plateau of Brazil. Although it is in the tropics, the trade winds from the sea help to keep it comfortably cool.

The farms of the Brazilian plateaus raise some beans, rice, sugar-cane, and cotton, but the important crop is corn. The Brazilian cornbelt farmers feed cattle and hogs for the market.

Supplying the world with coffee. The most important business in this part of Brazil is coffee-growing. Brazil grows almost two-thirds of the world's coffee. There is just the right amount of rain during the growing sea-



Paul's Photos

Fig. 683. A snake farm at São Paulo, Brazil. Snake venom, or poison from the snakes, is used to make medicines which are distributed to cure snake-bites.

son, and enough sunny days during the dry harvest season.

Many laborers are needed to care for the coffee trees, gather the beans, and prepare the crop for shipping. The coffee beans must first have the skins removed; then they must be washed, dried, and sacked. During the harvest season colonies of laborers come to live in little villages on the immense coffee plantations, or *fazendas* as they are called.

The center of the coffee industry is São Paulo, a modern city that is built high on the plateau. Its seaport is Santos, and here modern machinery loads the ships with sacked coffee.

The capital city. Not far north of Santos is the capital of Brazil, Rio de Janeiro. This city is located on one of the finest harbors in the whole world. It is the center of a good railroad system that connects cities along the coast with important inland cities.

Rio de Janeiro is built around the great curved harbor. It occupies a narrow strip of land between the harbor and the ring of mountains that surrounds it. A famous boulevard runs the whole length of the city. The city is modern and beautiful and is one of the cleanest cities in the world.

Mining and manufacturing. In the early days gold was found in the plateau region. And for nearly one hundred fifty years Brazil has produced many diamonds. One of the largest and best iron deposits in the world is located here. There are many other minerals, too, but these natural resources have not yet been fully developed. The lack of coal is one reason why manufacturing has not been more rapidly developed in Brazil. Brazil has rivers to furnish power, and manufacturing with electricity may solve this problem.

There are some flour-mills, meat-packing plants, and textile-mills in Brazil, but the country buys most of its manufactured products from the United States and, in normal times, from Great Britain, and Germany.

The campos. West of the plateau are immense grassy meadows, called the *campos*, where there is a large cattle industry. Better transportation will probably some day make this one of the great cattle lands of the world.

The basin of the Amazon. Now if you will look at the map on this page, you will see



Fig. 684. Compare this map with the one on page 430. Notice how the northern part of Brazil is drained by the Amazon River and its tributaries.



James Sawders

Fig. 685. These cattle are a mixture of Brazilian cattle and zebus that were imported from India.

that the upper half of Brazil is the valley of the Amazon River and the two hundred streams that flow into it.

The Amazon River is more than four thousand miles long. At its mouth it is sixty miles wide. For nearly two thousand miles inland the river is at least a mile wide. During the rainy season this giant river spreads out over its flat basin and makes swamps that are a hundred miles or more wide.

The Amazon basin is not a smooth, even region, but it is broken up by ridges and cliffs. It contains huge tropical forests and slopes covered with mosses and ferns.

The South American jungle. The heat and the rain that falls every day in all of the seasons produce a dense growth of trees and other plants. A tropical forest contains giant trees with thick trunks. Beneath their lower branches grow shorter, more slender trees. Below these are still shorter trees, and under them is a tangle of shrubs and vines. Under some trees it is so dark that nothing can grow and the ground is bare.

Not many white people enter the forests of the Amazon basin. There are almost no roads, because it is hard to cut trails through the jungle. Even where trails have been cut, the jungle soon grows up and fills them.

Inhabitants of the jungle. Several hundred thousand Indians live in this immense river basin. Most of them live in the hills during the rainy season when rain falls almost all day long. The dry season is from April to October. During that time they live in villages of reed huts and come to the river to fish.

These Indians fish and hunt for a living, but they also cultivate little patches of ground on which they grow corn and cassava.

Rubber plantations. The Indians could get plenty of work on the rubber plantations along the river and its streams. But they do not have to work in order to live, and so the number of laborers for the plantations is small.

The *hevea*, or rubber tree, grows along the rivers in the rich bottom land. There are thousands upon thousands of acres of these trees. Many of the plantations are owned by North American companies that send the crude rubber to the United States to be refined.



James Sawders

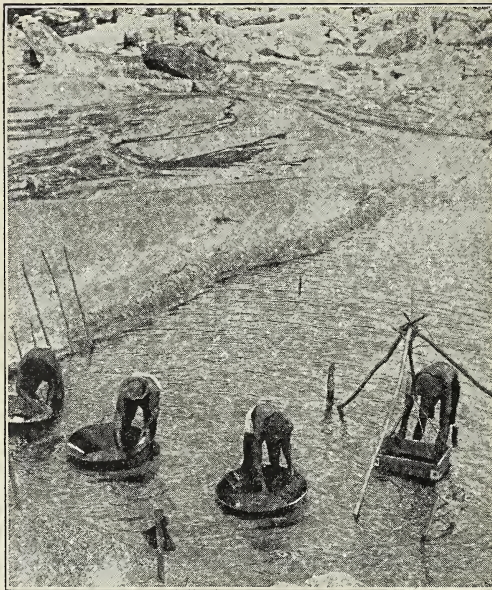
Fig. 686. A mangrove swamp in the state of Bahia, Brazil. In the hot, moist climate of the jungle all trees, vines, and shrubs grow rapidly.

River ports. For many years the rivers were the only means of transportation in this valley. Now many of the managers of the rubber plantations use airplanes for speedy travel. But the rubber itself is still shipped out by boat. Belém (Pará), at the mouth of the Amazon, is the great rubber port.

At Manaus, a thousand miles up the Amazon, is another thriving port. It is a modern city and is the center for shipping forest products such as nuts, hardwoods, and cassava.

The Portuguese in Brazil. In the early days of South American exploration, Europeans sailed many miles up the Amazon, looking for a passage through the continent. The huge mouth of the river seemed like an ocean passage. The first European to visit Brazil was Pinzon, a companion of Columbus. In 1500 the Portuguese explorer, Cabral, took possession of the land for his country. Portuguese colonists were sent to the new land. That is why Portuguese is the language of this country, while Spanish is the language of most of the other South American countries.

When the French invaded Portugal in 1808, the Portuguese royal family came to



James Sawders

Fig. 688. These prospectors are washing gravel in a river bed in order to find diamonds. Brazil furnishes many diamonds to the United States.

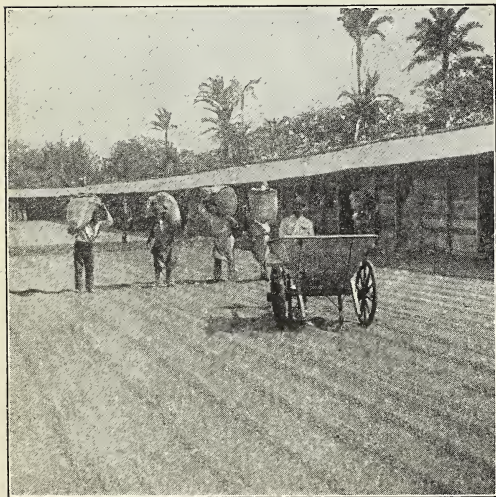
Brazil and lived there for fourteen years. In 1822 Brazil became an independent empire, but it did not become a republic until 1889.

A mixed population. The forty-six million people of Brazil are more mixed than those of any other South American country. Less than one-half of the people are white. The rest are Negroes, Indians, and people of mixed blood. As land is cheap and opportunities are inviting in Brazil, there has been up to the time of war a constant stream of immigrants coming from Europe.

QUESTIONS TO ANSWER

1. Find out the area of Brazil and the area of the United States? How much larger is Brazil?
2. Is the lack of coal a reason why manufacturing has developed slowly in Brazil?
3. What are some of the reasons why not many white people have entered the jungles of the Amazon basin?

4. How does the language of Brazil differ from that of most South American countries?
5. Why is rubber an important product in modern civilization?
6. Why did early European explorers think



Paul's Photos

Fig. 687. The drying platform of a large coffee plantation near Santos, Brazil.



Ewing Galloway

Fig. 689. This Brazilian is cutting the bark of a rubber tree so that the sap, or latex as it is called, will run down the grooves into the pail. The map on page 462 shows where rubber is produced in Brazil. Many rubber companies have thousands of acres of trees.

that the Amazon might be a passage through the continent? 7. What are some of the reasons you can think of why Brazil is especially attractive to emigrants from Europe?

THINGS TO DO

1. There have been many exciting travel and adventure stories written about the Amazon jungle of Brazil. Find some of these at the library and keep them on a table in your room, so that you can read parts of them as you have time.

2. Brazil is an especially good country about which to plan a picture exhibit. Find pictures of the Amazon, particularly of the jungle of the Amazon basin; pictures of the rubber, coffee, mining, and forest sections of the country; and pictures of Brazil's attractive cities, especially Rio de Janeiro with its fine harbor. Pictures of the savage tribes of the interior, and of animals and reptiles of the jungles would add interest to such a collection.

3. If it weren't for Brazil, we might have a hard

time getting enough coffee to supply the needs of the United States. Write a theme about coffee growing, and ask your teacher to read the best papers to the class. In working on your themes, you will find it helpful to read pages 49-63 of *From Panama to Cape Horn*, by Ethel Imogene Salisbury, and pages 217-224 of *South America*, by Isaiah Bowman.

4. Another important product of Brazil is rubber. Half the class might write themes on coffee, and the other half on the production of rubber. In finding material on rubber production, read *Peeps at Many Lands: South America*, by Edith Brown, pages 19-27, and *From Panama to Cape Horn*, by Ethel Imogene Salisbury, pages 33-47.

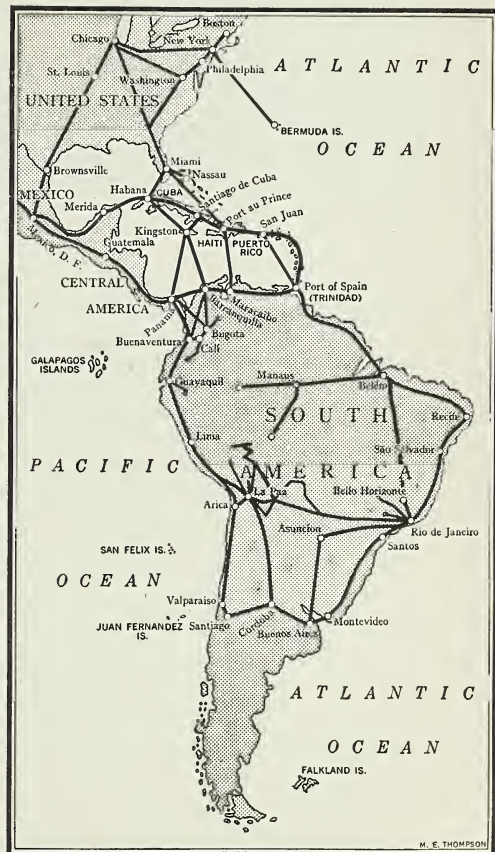


Fig. 690. This map shows the principal air lines from the United States to Mexico, the West Indies, Central and South America. An important line is not shown. It runs from the city of Mexico to Los Angeles, California.



Fig. 691. The city of Georgetown, British Guiana

Ewing Galloway

FOUR COLONIES

Europe in South America. Along the Atlantic coast, north of Brazil, are three small countries, French Guiana, Surinam, and British Guiana. Off the coast, north of British Guiana, is the large island of Trinidad, which is a colony of Great Britain. These are the only possessions of European countries in South America.

The Guianas. The Guianas, as this part of the mainland is called, consist of a low, swampy coastal plain, a second region of tropical forest, and a region of low mountains.

The mountains are rich in gold, aluminum ore, and other minerals, but there is no way to get them to the seacoast. The chief product of the forest region is *balata*, which is somewhat like rubber.

The region along the coast has been diked and drained in many places. Here most of the people of the Guianas live. The white people find it hard to endure the damp, hot climate.

A colony of France. French Guiana is the smallest of the three mainland colonies. In 1783 the French sent more than twelve thousand colonists to establish homes here. In two years about eleven thousand of them died of starvation and disease. Later the French sent convicts to colonize the country. You may have read about Devil's Island, a convict settlement close to the mainland. Perhaps you have also tasted cayenne pepper, which gets its name from Cayenne, the capital of French Guiana. There is almost no industry in this colony except gold-mining, and the country exports very little.

A colony of the Netherlands. Surinam, or Dutch Guiana as it is sometimes called, was given to the Netherlands by Great Britain in exchange for New Amsterdam, the Dutch colony that is now New York. Most of the people in Dutch Guiana are Hindus, Chinese, Negroes, and Javanese, who work on the sugar and rice plantations. Cocoa, coffee, and bananas are exported, and some gold is mined, but the colony is not prosperous. The capital

is Paramaribo, and one-third of the people of the entire colony live there.

An American colony of Great Britain. British Guiana is the largest of the three colonies, and the most prosperous. It exports gold, balata, aluminum ore, sugar, cocoanuts, rice, and lumber. The colony has only one hundred miles of railroad and almost no roads. Most of the transportation is by little river steamers.

Georgetown, the capital of British Guiana, is an unusual city. Parts of it have canals instead of streets. Many of the houses are built on piles, and a long sea-wall protects them.

The people of British Guiana are mostly Negroes and Hindus who have been brought in to work on the plantations. There are Indians and Chinese also, but very few Europeans.

An island colony. Trinidad is an island only six miles from the mainland at the mouth of the great Orinoco River. The island is large, being about one and one-half times the size of Connecticut. It is a land of fertile plains and mountain peaks.

Trinidad is chiefly noted for its asphalt. Every year Pitch Lake on the island supplies the world with thousands of tons of paving material.

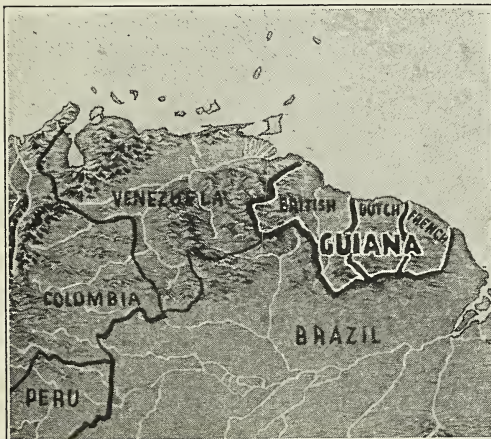


Fig. 692. This relief map shows how British, Dutch, and French Guiana are part of the northern highlands.



James Sawders

Fig. 693. Pitch Lake on the island of Trinidad is full of asphalt instead of water.

The island was discovered by Columbus in 1498 and ruled by the Spaniards until about 1800. The famous city, Port-of-Spain, is its capital.

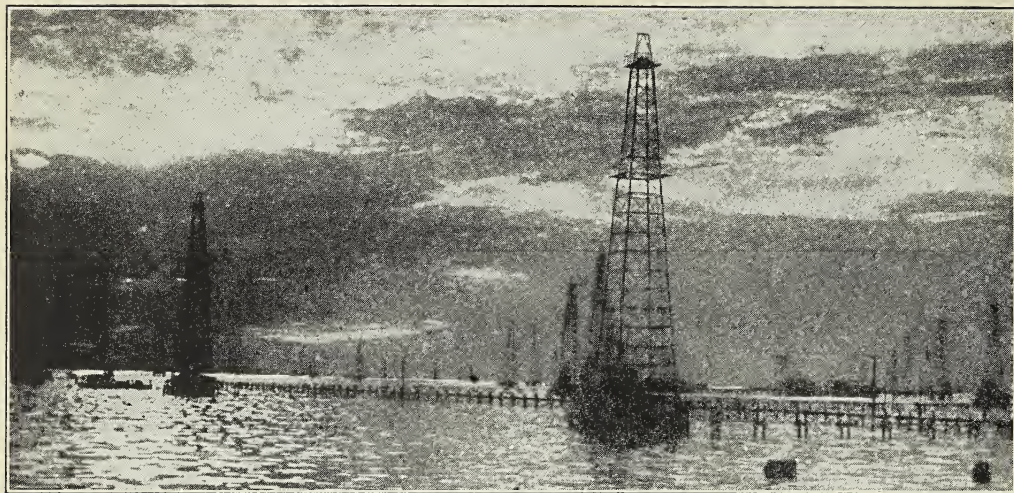
QUESTIONS TO ANSWER

1. In what ways are their colonies in the northern part of South America valuable to France, Holland, and Great Britain?
2. Explain why you think so many of the colonists sent to French Guiana died.
3. Can you think of any reason why these colonies have not become independent countries as the rest of South America has?
4. Why are the rivers so important in transportation?

THINGS TO DO

1. On an outline map mark the four European colonies discussed here. Write in small letters beside, or under, each name the chief products or resources of the colony and the name of the country which controls it.

2. Trinidad, as you have learned, is noted for its asphalt. Have your librarian help you look up information on asphalt, and make a report on what it is and how it is used.
3. Port-of-Spain, on the island of Trinidad, has an interesting story. Look up its history in an encyclopedia or other reference book and give a talk about it before the class.



Paul's Photos

Fig. 694. At Maracaibo, Venezuela, there are hundreds of oil wells, many of them drilled in the lake.

VENEZUELA

More highlands and lowlands. The northern part of Venezuela is mountainous. Two ridges of the Andes, which run east and west in this region, enclose fertile valleys. Here most of the people live. South of these mountains is the basin of the Orinoco River. This river basin is a huge *llano*, or grassy plain, where cattle are raised. Still farther south are the highlands of the Guianas. These are forest-covered plateaus.

Resources of Venezuela. Only a few Indians live in the forests, and not many people inhabit the grassy plains. Raising cattle is uncertain here because there are frequent droughts and then thousands of cattle die. In flood times more thousands drown.

Most of the people of Venezuela live in the valleys of the northern region. There are cacao, coffee, and sugar-cane plantations, and farms where tobacco, corn, and wheat are raised.

But the chief wealth of Venezuela is in its petroleum. There are large oil-fields in the region around Lake Maracaibo. The wells are close to ocean ports. Venezuela has be-

come the third largest oil-producing country in the world.

The home of Bolivar. The capital of Venezuela is Caracas. In this city is a cathedral which was built in 1614 by the Spaniards. General Simon Bolivar, who has been called the George Washington of South America, was born in Caracas. Venezuela was one of the first South American countries to free itself from Spanish rule.

QUESTIONS TO ANSWER

1. In an encyclopedia find out how Venezuela got its name. 2. In what ways are the products of Venezuela much like the products of other South American countries? Is Venezuela's chief product different from that of most South American countries?

THINGS TO DO

1. In earlier sections you read about Bolivar and reported on his life. Review his life and his great accomplishments. 2. Make a report on petroleum production. You can find information in the library on drilling for, and locating, petroleum as well as marketing it. Perhaps you can find additional information about the oil-fields of Venezuela. Bring to class pictures of large oil-fields and of "gushers."

LATIN AMERICA

A land that was like home. Although all the South American countries except the Guianas are now independent, Spanish and Portuguese customs are still followed. Mexico, Central America, and South America are called Latin America. They are given this name because the European countries which are known as the Latin countries have influenced them so much.

It was not just chance that the people of the southwestern European countries settled in this part of the New World, while people from the northern countries settled in North America. People from Spain and Portugal found land in Mexico, Central America, and South America that was very much like the land they knew at home. They had warm seacoast areas at home, where fruits grew well. They found the same kind of regions in the southern part of the New World. At home they had rugged mountains where gold

and silver were mined. The lofty mountains of the southern New World had such mines, too. At home they had flat grazing-lands and sloping pastures for cattle and sheep, and they found such places in the New World.

The Spaniards were famous gardeners, for they had learned much from the Arabs about raising fruits and vegetables. The Arabs had also taught them about sugar, cotton, and coffee. And so the Spanish settlers in the New World tried these crops and found that they grew better than in any other place in the world.

The colonists found the natives growing tobacco and cacao, from which cocoa and chocolate are made. They soon discovered that Europeans would pay well for tobacco and chocolate. And they found other valuable plants such as the potato.

Development of customs. Settlers kept coming to Latin America from Spain and Portugal. Not many people came from northern Europe, because they did not know so well



James Sawders

Fig. 695. An old-world custom in many parts of South America is the market-day such as you see here.

how to make a living in such a land. They preferred North America. And so it is not surprising that Latin America has the language and customs of Spain and Portugal.

Of course, not all the people of South America speak those two European languages or live as the Spanish and Portuguese do. There are millions of Indians in this part of the New World who still speak their own languages and live much as their ancestors did. But as they do slowly adopt the ways of white men, they naturally adopt the customs and languages of Latin America.

We must not think of all Latin America as a tropical land. It is true that there are many jungles and thousands of plantations where tropical fruits and other products grow. But

there are also many high plateaus where the weather is cool, and mountains where it is always cold. There are plains like the western ranges of North America, where cattle graze, and there are hillside orchards like those in the states of Washington and New York.

Toward the southern end of South America, where the land is as far from the equator as is the Great Lakes region, the climate is temperate. To this part of the world have come people from the northern European countries just as immigrants from those countries came to North America years ago.

These newcomers from other lands often settle close together and continue to speak their European languages and practice European customs. That also happened in the United States. But their children will grow up as South Americans, just as the children of immigrants to the United States grew up as citizens of North America.

QUESTIONS TO ANSWER

1. Explain why Mexico, Central America, and South America are often called Latin America.
2. Why were the peoples of Spain and Portugal attracted to South America?
3. What were some of the crops of the New World with which the European explorers were unfamiliar?
4. Explain why different customs grow up in different countries. How can heat or cold affect the customs of a people?

THINGS TO DO

1. On a large outline map mark one or two products of each South American country. Mark the climate to be found in different parts of the continent. You cannot do this exactly, of course, for you cannot write down all the differences in climate in each country.

2. Add pictures and samples of products to the South American exhibit you started.
3. Plan a trip to South America. Travel folders from steamship and airplane lines will help you in deciding where you would like to go. You can get more ideas of interesting places to be seen by reading *From Panama to Cape Horn*, by Ethel Imogene Salisbury, or *Twin Travelers in South America*, by Mary H. Wade.



Fig. 696. This map shows where the chief products of South America are produced. It also shows the principal railroads. Notice the large region where there are no railroads. Rivers must be used to get products to market in much of South America.

REFERENCE TABLES

INTERESTING FACTS ABOUT THE STATES

(Note: Population figures from U. S. Bureau of Census data, Dec. 4, 1940.)

STATE	AREA IN SQ. MILES	POPULATION	SET'L'D	BECAME STATE	MEANING OR ORIGIN OF NAME	NICKNAME	STATE FLOWER
Alabama.....	51,998	2,832,951	1702	1819	Here we rest	Cotton	Goldenrod
Arizona.....	113,956	499,261	1536	1912	Little spring	Apache	Sahuaro cactus
Arkansas.....	53,335	1,949,387	1685	1836	Arkansas Indians	Bear	Apple blossom
California.....	158,297	6,907,387	1769	1850	Hot oven	Golden	Golden poppy
Colorado.....	103,948	1,123,296	1858	1876	Red water	Centennial	Columbine
Connecticut....	4,965	1,709,242	1633	1788	Long river	Nutmeg	Mt. laurel
Delaware.....	2,370	266,505	1631	1787	Lord De la Warr	Blue Hen	Peach blossom
Florida.....	58,666	1,897,414	1565	1845	Feast of flowers	Peninsula	Orange flower
Georgia.....	59,265	3,123,723	1732	1788	King George II	Cracker	Cherokee rose
Idaho.....	83,888	524,873	1809	1890	Behold the sun	Gem	Syringa
Illinois.....	56,665	7,897,241	1700	1818	Illinois Indians	Prairie or Sucker	Wood violet
Indiana.....	36,354	3,427,796	1727	1816	Indian's land	Hoosier	Tulip tree
Iowa.....	56,147	2,538,268	1788	1846	Ioway Indians	Hawkeye	Wild rose
Kansas.....	82,158	1,801,028	1827	1861	Kansas Indians	Jayhawk	Sunflower
Kentucky.....	40,598	2,845,627	1765	1792	Land of tomorrow	Blue Grass	Goldenrod
Louisiana.....	48,506	2,363,880	1699	1812	King Louis XIV	Pelican	Magnolia
Maine.....	33,040	847,226	1625	1820	Old Fr. province	Pine Tree	Pine cone
Maryland.....	12,327	1,821,244	1631	1788	Henrietta Maria	Old Line	Black-eyed Susan
Massachusetts..	8,266	4,316,721	1620	1788	Great hills place	Bay	Mayflower
Michigan.....	57,980	5,256,106	1668	1837	Great water	Wolverine	Apple blossom
Minnesota.....	84,682	2,792,300	1819	1858	Sky-colored water	Gopher	Moccasin
Mississippi.....	46,865	2,183,796	1699	1817	Father of waters	Bayou	Magnolia
Missouri.....	69,420	3,784,664	1764	1821	Missouri Indians	Show Me	Hawthorn
Montana.....	146,997	559,456	1846	1889	Mountain	Treasure	Bitter-root
Nebraska.....	77,520	1,315,834	1847	1867	Flat water	Cornhusker	Goldenrod
Nevada.....	110,690	110,247	1850	1864	Snow-clad	Sage-Brush	Sage-brush
New Hampshire..	9,341	491,524	1623	1788	English county	Granite	Purple lilac
New Jersey....	8,224	4,160,165	1617	1787	Island of Jersey	Garden	Violet
New Mexico.....	122,634	531,818	1598	1912	Aztec god Mexitli	Sunshine	Yucca
New York.....	49,204	13,497,142	1614	1788	Duke of York	Empire	Rose
N. Carolina.....	52,426	3,571,623	1587	1789	King Charles I	Tar-Heel	Goldenrod
N. Dakota.....	70,837	641,935	1780	1889	Alliance of friends	Flickertail	Prairie rose
Ohio.....	41,040	6,907,612	1788	1803	Beautiful river	Buckeye	Carnation
Oklahoma.....	70,057	2,336,434	1889	1907	Red people	Sooner	Mistletoe
Oregon.....	96,699	1,089,684	1811	1859	Ouragan (storm)	Beaver	Grape flower
Pennsylvania...	45,126	9,900,180	1643	1787	Penn's woods	Keystone
Rhode Island...	1,248	713,346	1636	1790	Isle of roses	Little Rhody	Violet
S. Carolina.....	30,989	1,899,804	1670	1788	King Charles I	Palmetto	Yellow jessamine
S. Dakota.....	77,615	642,961	1832	1889	Alliance of friends	Sunshine	Pasque flower
Tennessee.....	42,022	2,915,841	1769	1796	Indian name	Volunteer	Passion flower
Texas.....	265,896	6,414,824	1685	1845	Friends	Lone Star	Bluebonnet
Utah.....	84,990	550,310	1847	1896	Ute Indians	Beehive	Sego lily
Vermont.....	9,564	359,231	1724	1791	Green mountain	Green Mountain	Red clover
Virginia.....	42,627	2,677,773	1607	1788	Virgin Queen	Old Dominion	Dogwood
Washington....	69,127	1,736,191	1811	1889	English name	Evergreen	Rhododendron
W. Virginia....	24,170	1,901,974	1727	1863	Panhandle	Rhododendron
Wisconsin.....	56,066	3,137,587	1669	1848	Rushing river	Badger	Violet
Wyoming.....	97,914	250,742	1834	1890	On the great plain	Equality	Indian Paint-brush

STATE PRODUCTS AND INDUSTRIES

ALABAMA. Blast-furnace products, cast-iron pipes and fittings, coal, corn, cotton, cotton-seed, dairy products, lumber, live stock, poultry

ARIZONA. Cattle, copper, copper smelting, cotton-lint, dairy products, fruit and truck, gold, silver

ARKANSAS. Bauxite, corn, cotton, dairy products, hay, live stock, lumber, oats, petroleum refining, potatoes, strawberries

CALIFORNIA. Canning, citrus fruits, cotton-lint, dairy products, dry beans, fish, gold, hay, live stock, lumber, meat packing, motion-pictures, petroleum, rubber tires, sugar-beets, wheat

COLORADO. Coal, dairy products, flour, gold, hay, live stock, meat packing, potatoes, sugar-beets, wheat

CONNECTICUT. Boxes and paper, clocks, cotton goods, electrical machinery, hardware, hats, live stock, lumber, machine shops and tools, metal alloys, printing, rayon manufactures, silverware, typewriters

DELAWARE. Apples, canning, cellulose plastic articles, corn, dairy products, hay, leather, live stock, pulp articles, synthetic rosin, wheat

FLORIDA. Canning, citrus fruits, corn, fertilizer, live stock, lumber, tobacco products, tomatoes, turpentine

GEORGIA. Clay products, corn, cotton products and manufactures, dairy products, live stock, lumber, meat packing, peaches, peanuts, stone, tobacco, turpentine

IDAHO. Apples, cattle, dairy products, hay, lead, lumber, potatoes, sheep, silver, wheat

ILLINOIS. Agricultural implements, boots and shoes, canned goods, confectionery, corn, dairy products, grain-mill products, liquor, live stock, machinery, machine shops, meat packing, men's and women's clothing, motor vehicles, paints, petroleum refining, printing and publishing, radio apparatus and phonographs, railroad center, steel and iron, tinware

INDIANA. Blast-furnace products, canned goods, cattle, corn, dairy products, electric machinery, furniture, glass, grain products, logs, machine shops, meat packing, motor vehicles and parts, petroleum refining, refrigerators, steel and iron, wheat

IOWA. Butter and other dairy products, cattle, corn, hay, hogs, meat packing, oats

KANSAS. Butter, cattle, corn, dairy products, flour, hay, meat packing, oats, petroleum and refining, wheat

KENTUCKY. Cattle, coal, corn, dairy products, flour, hay, liquor, meat packing, petroleum refining, poultry, tobacco

LOUISIANA. Corn, cotton, live stock, lumber, paper, petroleum refining, rice, sugar-cane and refining

MAINE. Canning, cattle, cotton manufacturing, dairy products, fish, hay, oats, paper, potatoes, pulp, shoes, wool manufacturing

MARYLAND. Canned and dried fruits and vegetables, corn, dairy products, fertilizer, liquors, meat packing, men's cotton and woolen clothes, paint, paper, potatoes, printing, tobacco

MASSACHUSETTS. Boots and shoes, chemicals, cotton and rayon and silk manufactures, eggs, electrical machines, fish, hay, leather, live stock, machinery, paper, printing and publishing, rayon apparel, wool manufacturing

MICHIGAN. Automobiles, corn, dry beans, foundries, hardware, hay, live stock, machine shops and machine tool accessories, potatoes, refrigerators, steel, wheat

MINNESOTA. Barley, butter, canned fruits and vegetables, corn, flour, hay, iron ore, linseed-oil, liquors, meat packing, oats, paper, wheat

MISSISSIPPI. Butter, corn, cotton, cotton manufacture, live stock, lumber

MISSOURI. Cattle, corn, cotton, electrical machinery, flour, hay, lead, meat packing, mules, oats, paint, poultry and eggs, shoes, wheat

MONTANA. Cattle, copper, flour, hay, petroleum, sheep, silver, sugar-beets, wheat

NEBRASKA. Butter, cattle, corn, dairy products, eggs, flour, hay, hogs, meat packing, oats, potatoes, poultry, wheat

NEVADA. Cattle, copper, gold, silver, zinc

NEW HAMPSHIRE. Cotton manufactures, knit goods, lumber, machinery, paper, shoes, wool manufactures

NEW JERSEY. Chemicals, copper smelting, electrical machinery, meat packing, men's and women's clothing, paint, perfumes, petroleum, radio appliances and phonographs, rubber goods, ship-building, silk manufactures, wool manufactures

NEW MEXICO. Cattle, coal, cotton-lint, hay, lumber products, petroleum, sheep

NEW YORK. Bakery products, boots and shoes, cane-sugar refining, cattle and other live stock, chemicals, cotton manufactures, dairy products, electrical machinery, feed, flour, furniture, furs, gas (manufactured), knit goods, liquors, meat packing, men's and women's clothing, motor vehicles and parts, paper, printing and publishing

NORTH CAROLINA. Cigarettes, corn, cotton, cotton manufactures, knit goods, rayon manufactures, tobacco

NORTH DAKOTA. Barley, butter, cattle, flour and other grain-mill products, hay, potatoes, wheat

OHIO. Cattle clay products, corn, dairy products, electrical machinery and supplies, hay, hogs, iron, machinery and machine shops, meat packing, motor vehicles, oats, paper, petroleum refining, potatoes, poultry, steel works, tires, wheat

OKLAHOMA. Butter, cattle, coal, corn, cotton dairy products, flour, glass, hogs, mules, natural gas, oats, petroleum, poultry, wheat, zinc

OREGON. Butter, canned fruits, flour, fruits, gold, lumber, meat packing, oats, paper, potatoes, wheat

PENNSYLVANIA. Blast-furnace products, canning, carpets, coal, coke, electrical machines, glass, knit goods, liquors, meat packing, paper, petroleum, refining, potatoes, printing and publishing, railroad repair shops, rayon manufactures, steel works, wool manufactures

RHODE ISLAND. Cotton manufactures, jewelry, rayon manufactures, silk, wool manufactures

SOUTH CAROLINA. Corn, cotton, cotton-seed, lumber, oats, stone, textile manufactures, tobacco

SOUTH DAKOTA. Barley, butter, cattle, corn, dairy products, meat packing, poultry

TENNESSEE. Chemicals, coal, corn, cotton, cotton manufactures, flour, knit goods, lumber, meat packing, men's cotton clothing, mules and other live stock, rayon, tobacco

TEXAS. Cattle, corn, cotton, cotton-seed manufactures, flour, machinery, meat packing, petroleum, poultry, sulphur, wheat

UTAH. Beet-sugar, cattle, coal, copper, flour, gold, sheep, silver, wheat

VERMONT. Corn, dairy products, horses, lumber, machine tools, marble, paper, slate, wool manufactures

VIRGINIA. Corn, dairy products, fertilizer, furniture, paper, peanuts, potatoes, poultry, railroad repair shops, tobacco

WASHINGTON. Apples, canned fruits and vegetables, flour, lumber, oats, paper, salmon, wheat

WEST VIRGINIA. Chemicals, coal, corn, dairy products, glass, natural gas, petroleum, pottery, steel works

WISCONSIN. Agricultural implements, barley, butter, cheese, condensed milk, corn, liquors, meat packing, motor vehicles, oats, paper, potatoes, shoes

WYOMING. Cattle, coal, dry beans, hay, petroleum and refining, sheep, sugar-beets

CITIES OF THE UNITED STATES*

NEW ENGLAND CITIES

(CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, VERMONT)

Cities that are starred (*Augusta) are state capitals. A city printed in **black type** is the largest city in the state.

CITY	POPULATION	INTERESTING FACTS
Ansonia, Conn.	19,210	Brass, machinery, electrical equipment
Arlington, Mass.	40,013	Suburb of Boston; truck farms
Attleboro, Mass.	22,071	Dyeing; jewelry, optical goods
Auburn, Me.	19,817	Shoes; meat-packing, agriculture
*Augusta, Me.	19,360	Lumber, paper, cotton goods, shoe factories; resort
Bangor, Me.	28,822	Paper, beverages, lumber, mattresses, furs
Belmont, Mass.	26,867	Market gardens
Berlin, N. H.	19,084	Paper pulp
Beverly, Mass.	55,587	Suburb of Boston; shoes, shoe-making machinery; cod fisheries
Biddeford, Me.	19,790	Textile machinery, cotton goods, shoes, lumber; fisheries
*Boston, Mass.	770,816	Seaport; wool, shoes, leather, cotton textiles, fish, clothing
Braintree, Mass.	16,378	Shoes, paper, rubber goods; oil-refinery
Bridgeport, Conn.	147,121	Firearms, hardware, typewriters, sewing-machines
Bristol, Conn.	30,167	Ball-bearings, clocks, springs, golf clubs, fishing rods, brass goods
Brockton, Mass.	62,343	Shoes, shoemakers' supplies and tools
Brookline, Mass.	49,786	Suburb of Boston
Burlington, Vt.	27,686	Woolen and cotton goods, lumber, maple sugar, granite
Cambridge, Mass.	110,879	Suburb of Boston; soap, confectionery, rubber goods
Central Falls, R. I.	25,248	Cotton and woolen goods, silk, chocolate
Chelsea, Mass.	41,259	Suburb of Boston; rubber goods, leather, furniture
Chicopee, Mass.	41,664	Cotton and woolen goods, athletic goods, guns, tires
*Concord, N. H.	27,171	Belting, wooden goods, leather, silverware
Cranston, R. I.	47,085	Textiles
Danbury, Conn.	22,339	Men's hats, silks, knitting machinery
Dedham, Mass.	15,508	Residential city; cotton goods, pottery
East Hartford, Conn.	18,615	Residential city; airplanes, tobacco, agriculture
East Providence, R. I.	32,165	Oysters, chemicals, wire, shoe-strings
Everett, Mass.	46,784	Oils, gasoline, tar, coke

*This table will help you to find out what the people in these cities are doing. It does not contain the names of any cities with less than 15,000 population unless they are state capitals. Some other cities may have been left out, too. You may also find that some more products and industries can be added to this list. The

population figures are from the Sixteenth Census of the United States, 1940.

The facts about the cities came from *N. W. Ayre & Son's Directory of Newspapers and Periodicals*, from statistical abstracts, from encyclopedias, and from *The World Almanac* for 1941.

NEW ENGLAND CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Fall River, Mass.....	115,428	Webbing, leather, belting, hats
Fitchburg, Mass.....	41,824	Shoes, paper, woolen goods, saws, knives
Framingham, Mass.....	23,214	Woolen and rubber goods, clocks, paper goods, shoes
Gardner, Mass.....	20,206	Furniture, go-carts, oil-stoves, time-clocks
Gloucester, Mass.....	24,046	Fish, glue, fish nets
Greenfield, Mass.....	15,672	Faucets, dies, silverware, cutlery
Greenwich, Conn.....	5,981	Residential city; private schools
Hamden, Conn.....	19,020†	Elastic fabrics, organs, electric coils, rubber insulated wire
*Hartford, Conn.....	166,267	Insurance center; typewriters, precision tools, brushes
Haverhill, Mass.....	46,752	Women's shoes, leather, woolen goods, boxboard, felt hats
Holyoke, Mass.....	53,750	Satin, silk, taffeta, silk hosiery, fine writing-paper
Lawrence, Mass.....	84,323	Worsted, cotton goods, shoes; printing and dyeing of cloth
Leominster, Mass.....	22,226	Paper boxes, horns, ivory and celluloid goods, pianos
Lewiston, Me.....	38,598	Cotton and rayon textiles, shoes, lasts, woolen goods, spools
Lowell, Mass.....	101,389	Silk and cotton products, hosiery, shoes, mohair, plush, machinery
Lynn, Mass.....	98,123	Shoes, electrical equipment, machinery, medicines, soap
Malden, Mass.....	58,010	Rubber boots and shoes, fire hose, soap, automobile tires
*Manchester, N.H.....	77,685	Cotton and woolen mills; shoes, textiles, brushes, paper, underwear
Marlboro, Mass.....	15,154	Shoes, paper and wire goods, machinery; dairy and fruit farms
Medford, Mass.....	63,083	Paper and wooden boxes, rubber goods, automobiles, radios, valves
Melrose, Mass.....	25,333	Dress materials, food products, jewelry, polish, machine supplies
Meriden, Conn.....	39,494	Airport; silverware, ball-bearings, machine screws, lamps, shades
Methuen, Mass.....	21,880	Worsted cloth, yarn, cigars, shoes, dairy products, poultry
Middletown, Conn.....	26,495	Office supplies, marine hardware, silver-plated ware
Milton, Mass.....	18,708	Suburb of Boston; residential town
*Montpelier, Vt.....	8,006	Cleaning fluid, clothes-pins, granite monuments, concrete products
Nashua, N. H.....	32,927	Cotton manufactures; paper, barrels and kegs, asbestos products
Newburyport, Mass.....	13,916	Shoes, silverware, ovens, electrical goods, wooden boxes, clothing
New Bedford, Mass.....	110,341	Distribution of raw cotton; fancy cotton and silk manufactures
New Britain, Conn.....	68,685	Hardware, tools, electrical appliances, bearings, knit goods
New Haven, Conn.....	160,605	Foreign commerce; guns, ammunition, hardware, clocks, watches
New London, Conn.....	30,456	Port; naval and coast-guard center; tooth-paste, submarines
Newport, R. I.....	30,532	Summer resort; torpedoes, chewing-gum, cartoning machinery
Newton, Mass.....	69,873	Radio tubes, yarn, knit goods, infants' wear, railway signals, silk
North Adams, Mass.....	22,213	Cotton-print and woolen mills; fancy leathers, and shoes
Northampton, Mass.....	24,794	Trading center; cutlery, baskets, silk, silk hosiery
Norwalk, Conn.....	39,849	Harbor; airport; men's hats, automobile tires, pumps, locks
Norwich, Conn.....	23,652	Steamboat connections; thermos bottles, cartons, awnings, velvet
Pawtucket, R. I.....	75,797	Silk, rayon, cotton and woolen cloth, thread, lace, tape, braid
Peabody, Mass.....	21,711	Leather, cotton goods, shoes, leather machinery, leather finishes
Pittsfield, Mass.....	49,684	Airport; electrical equipment, woolen textiles, silk thread
Portland, Me.....	73,643	Airports; foreign and coastwise trade; confectionery, cakes
*Providence, R. I.....	253,504	Airport; port of entry for oil; jewelry, silverware, soap, woolens
Quincy, Mass.....	75,810	Weighing and packaging machines, telephones, rivets, studs, paint
Revere, Mass.....	34,405	Airport; cigars, beverages, fireproof building materials, tinsel
Rutland, Vt.....	17,082	Scales, stone-working machinery, sand pumps, sugar-makers' utensils
Salem, Mass.....	41,213	Port of entry; cotton cloth, leather, lumber goods, shoes, oil
Somerville, Mass.....	102,177	Meat-packing, automobile assembling; brass and copper tubing
Springfield, Mass.....	149,554	Airport; electrical machinery and equipment, motors, magnetos
Stamford, Conn.....	47,938	Locks, bearings, postage meters, shavers, magnesia products, paint
Taunton, Mass.....	37,395	Airport; foundry; furnaces, gas ranges, pewter ware, cotton goods
Torrington, Conn.....	26,988	Brass, copper, nickel sheets, tubes, rods, wire, lathes
Wakefield, Mass.....	16,223	Willow and rattan furniture, screen doors, toys, chemicals, mats
Waltham, Mass.....	40,020	Clocks, watches, textiles, rivets, dials and gauges, rubber
Warwick, R. I.....	28,757	Summer resort
Waterbury, Conn.....	99,314	Center of brass industry; brass and copper goods, clocks, watches
Watertown, Mass.....	35,427	Rubber footwear, rubberized and waterproofed cloth, lifting jacks

NEW ENGLAND CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Waterville, Me.	16,688	Pulp, cotton goods, worsted, paper plates, shirts
Westfield, Mass.	18,793	Paper, thread, boxes, hardware, castings, whips, cigars, bicycles
West Hartford, Conn.	33,776	Suburb of Hartford
West Haven, Conn.	30,021	Airport; elastic fabrics, pipe-organs, rock drills, glazed paper
West Warwick, R. I.	18,188	Cottons, woolens, worsteds, velvet, silk hat-linings, lace
Winthrop, Mass.	16,768	Suburb of Boston; residential town
Woburn, Mass.	19,751	Shoes, chemicals, edge-tools, leather-making machinery, gelatin
Woonsocket, R. I.	49,303	Rayons, woolens, worsteds, yarns, plush, corduroy
Worcester, Mass.	193,694	Airport; steel and wire goods, shoes, rugs, looms, textiles

MIDDLE ATLANTIC CITIES

(NEW YORK, PENNSYLVANIA, NEW JERSEY)

CITY	POPULATION	INTERESTING FACTS
*Albany, N. Y.	130,577	Airport; terminus of Barge Canal; port; embossed wood-blocks
Aliquippa, Pa.	27,023	Steel mills; paint, varnish, pipe wrappings, boxes
Allentown, Pa.	96,904	Airport; cement, bricks, steel and metal products, silk, rayon
Altoona, Pa.	80,214	Two airports; steam and electric locomotives, passenger-cars
Ambridge, Pa.	18,968	Structural steel, steel tubing, metal molding, wrought-iron
Amsterdam, N. Y.	33,329	Airport; rugs, carpets, brooms, sweaters, hosiery, silk gloves
Atlantic City, N. J.	64,094	Two airports; summer and winter resort; salt-water taffy, clothing
Auburn, N. Y.	35,753	Farm implements, Diesel engines, surgical instruments, wagons, rope
Batavia, N. Y.	17,267	Trade center; shoes, paper boxes, die castings, farm implements
Bayonne, N. J.	79,198	Petroleum refineries; chemicals, paint, wire, motor-boats, silk
Beaver Falls, Pa.	17,098	Pipe, tubing, cold-drawn steel, steel castings, explosives, paint
Belleville, N. J.	28,167	Wire, copper rollings, rubber, tires
Bethlehem, Pa.	58,490	Steel, iron, foundry and graphite products, silk, cigars, pumps
Binghamton, N. Y.	78,309	Airports; shoes, cigars, flour, farm implements, organs
Bloomfield, N. J.	41,623	Cloth, books, radio tubes, lamps, toothpaste, drugs
Braddock, Pa.	18,326	Steel, granite, marble, wire, chains, gasoline, beverages, wagons
Bradford, Pa.	17,691	Refined crude-oil products, oil-well machinery, torpedoes
Bridgeton, N. J.	15,992	Glass bottles and jars; gas plant; fruit and vegetable canning
Buffalo, N. Y.	575,901	Eastern terminus of four Great Lakes; lumber, flour, chemicals
Butler, Pa.	24,477	Steel railroad cars, strip steel, seamless pipe, shirts, mirrors
Camden, N. J.	117,536	Airport; radios, canned soups, fiber containers, food products
Carbondale, Pa.	19,371	Machine- and car-shops; coal, chemicals, plows, boilers, tanks
Chester, Pa.	59,285	Textile mills, machine-shops, foundries; steel, dyewood, brick
Clairton, Pa.	16,381	Steel, coke by-products, mineral oils, benzol and tar products
Cliffside Park, N. J.	16,892	Residential suburb
Clifton, N. J.	48,827	Machinery, silk, cotton, lumber, rubber goods, oil cloth, hardware
Cohoes, N. Y.	21,955	Cotton and woolen knitting mills, tractor plant, paper mills
Corning, N. Y.	16,212	Glass products, air compressors, fiber boxes, terra-cotta
Cortland, N. Y.	15,881	Screen cloth, wire netting, fish-line, motor trucks, wall-paper
Dunkirk, N. Y.	17,713	Locomotives, radiators, boilers, shovels, glass bottles, silk
Dunmore, Pa.	23,086	Store fixtures, infants' and children's wear, cardboard, coal
Duquesne, Pa.	20,693	Chemicals, cement blocks, steel, coal
Easton, Pa.	33,589	Airport; slate, steel, iron, cement, silk, paint, chemicals
East Orange, N. J.	68,945	Electric motors, hydrants, valves, generators, foundry products
Elizabeth, N. J.	109,912	Anthracite coal, oil, gas, copper, petroleum, leather products
Elmira, N. Y.	45,106	Airport; milk bottles, valves, iron bridges, wooden pipe, silk
Endicott, N. Y.	17,702	Shoes, leather, time-clocks, tabulating machines, farm products
Englewood, N. J.	18,966	Residential town
Erie, Pa.	116,955	Airports; lake commerce, boilers, engines, electric locomotives
Freeport, N. Y.	20,410	Residential suburb of New York; nurseries; fish and oysters
Garfield, N. J.	28,044	Woolen and rubber goods, electrical supplies, waxed paper, yarns
Geneva, N. Y.	15,555	Trade center; optical goods, enamel ware, boilers, steel type
Glens Falls, N. Y.	18,836	Newsprint, shirts, dresses, wall-paper, cement, lace

MIDDLE ATLANTIC CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Gloversville, N. Y.....	23,329	Leather gloves and mittens, silk, cottons, woolen knit goods
Greensburg, Pa.	16,743	Valves and fittings, electric power-plant equipment, steel pipe
Hackensack, N. J.	26,279	Paper, silk, paper board, boxes, chemicals, women's clothing
*Harrisburg, Pa.	83,893	Airports; machinery, cutting dies, steel products, building materials
Harrison, N. J.	14,171	Steel, roller-bearings, elevators, wire, leather, pumps, metal toys
Hazleton, Pa.	38,009	Airport; silk, shirts, underwear, paper boxes, iron and steel products
Hoboken, N. J.	50,115	Leather goods, drawing instruments, lead pencils, baking-powder
Homestead, Pa.	19,041	Iron and steel products, heavy mill machinery, airplane propellers
Hornell, N. Y.	15,649	Trade center; railroad repair shops, wood-working mills; coffee-mills
Irondequoit, N. Y.	23,376	Residential city
Irvington, N. J.	55,328	Smelters, tanneries, foundries, novelty and die factories; cement
Ithaca, N. Y.	19,730	Chain drives, belting, shot-guns, adding machines, leather goods
Jamestown, N. Y.	42,638	Furniture, metal products, worsted, towels, woolen yarn, flour
Jeanette, Pa.	16,220	Window glass, rubber, toys, cement, iron castings, steam-fittings
Jersey City, N. J.	301,173	Port; trade in iron, coal, general merchandise, soap
Johnstown, Pa.	66,668	Airport; iron and steel products, fire-brick, radiators
Kearny, N. J.	39,467	Oil refineries; linoleum, coal-tar chemicals, batteries, coke, lacquer
Kenmore, N. Y.	18,612	Residential town
Kingston, N. Y.	28,589	Airport; coal and brick shipping; foundry products, hotel equipment
Kingston, Pa.	20,679	Railway repair shops; silk, hosiery, underwear, adding machines
Lackawanna, N. Y.	24,058	Brake beams, beverages, monuments
Lancaster, Pa.	61,345	Airports; linoleum, silk, watches, umbrellas, cigars, metal products
Lebanon, Pa.	27,206	Iron and steel, textiles, clothing, food products, furniture; breweries
Linden, N. J.	24,115	Clothing, chemicals, paint, varnish, gasoline, oil
Lockport, N. Y.	24,379	Radiators, cotton batting, paper products, tackle blocks, textiles
Long Branch, N. J.	17,408	Silk, rain-coats, clothing, blouses, underwear, hats, sashes and doors
Lyndhurst, N. J.	17,454	Residential town; diversified farming
McKeesport, Pa.	55,355	Pipe, tin plate, boilers, radiators, iron and steel sheets, tool steel
McKees Rocks, Pa.	17,021	Railroad supplies and accessories, coal, steel, tools, enamel ware, wire
Meadville, Pa.	18,919	Hookless fasteners, boilers, rayon, tools, machinery, steel
Middletown, N. Y.	21,908	Trade center; railroad shops, foundries, tannery; silk, shirts
Monessen, Pa.	20,257	Steel and steel products, sheet and tin plate, beverages, boxes
Montclair, N. J.	39,807	Chemicals, metal signs, hydraulic jacks, clothing
Morristown, N. J.	15,270	Rubber products, drugs, nurses' uniforms, lingerie, umbrellas
Mount Carmel, Pa.	17,780	Cigars, silk, shirts, wood-turning products, anthracite coal
Mount Vernon, N. Y.	67,362	Soap, dyes, rotogravure presses, electrical equipment, clothing
Nanticoke, Pa.	24,387	Mine drills, silk, cigars, women's and children's dresses
Newark, N. J.	429,760	Airport; industrial center; port; paint, varnish, chemicals, leather
New Brunswick, N. J.	33,180	River port; steamboat connections; airport; automobile trucks
Newburgh, N. Y.	31,883	Artificial leather, textiles, clothing, carpets, lawn mowers
New Castle, Pa.	47,638	Airport; tin plate, cans, pottery, radiators, steel, brass, bronze
New Kensington, Pa.	24,055	Glass, aluminum, electrical goods, metal car roofs; coal mines
New Rochelle, N. Y.	58,408	Steamboat landing; power lawn mowers, plumbing supplies
New York, N. Y.	7,454,995	Airports; harbor; publishing; clothing, foods, beverages, tobacco
Niagara Falls, N. Y.	78,029	Airport; hydro-electric power-plant; resort; iron alloys, electrodes
Norristown, Pa.	38,181	Airport; textiles, textile machinery, yarn, airplane tubing, asbestos
North Braddock, Pa.	15,679	Residential city; steel mills
North Bergen, N. J.	39,714	Residential city; suburb of New York
North Tonawanda, N. Y.	20,254	Harbor; nuts and bolts, musical instruments, steel, pig-iron
Nutley, N. J.	21,954	Paper, woolens, hats, printed textiles, plush; rug renovating
Ogdensburg, N. Y.	16,346	Ferry; grain, lumber, fiber and wood products, flour, gloves, clothing
Oil City, Pa.	20,379	Oil-well supplies, gas engines, barrels, explosives, paper containers
Olean, N. Y.	21,506	Petroleum products, machinery, ceramic tile, glass containers
Orange, N. J.	35,717	Electrical products, adding machines, dictaphones, surgical supplies
Ossining, N. Y.	15,996	Wire, drugs, maps, underwear, cosmetics, house dresses, stoves
Oswego, N. Y.	22,062	Trade in coal, lumber, freight; state grain-elevator; boiler foundries
Passaic, N. J.	61,394	Leather, woolens, cottons, plush, rubber goods, handkerchiefs
Paterson, N. J.	139,656	Airport; silk thread, silk and linen textiles, twine, cordage

MIDDLE ATLANTIC CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Perth Amboy, N. J.....	41,242	Port; dry-docks; foundry; terra-cotta, clay products, vaseline
Philadelphia, Pa.....	1,931,334	Airports; port; petroleum and cane-sugar refineries, textile mills
Phillipsburg, N. J.....	18,314	Silk, air compressors, oil engines, steam pumps, cast-iron pipe
Pittsburgh, Pa.....	671,659	Airports; iron, steel, soft coal and coke, airbrakes, glass
Pittston, Pa.....	17,828	Paper, sweaters, beverages, stoves, textiles, confectionery, pants
Plainfield, N. J.....	37,469	Automobile trucks, buses, newspaper printing-presses, broad silk
Port Chester, N. Y.....	23,073	Stoves, iron bolts, nuts, plumbers' supplies, electric fans, machinery
Pottstown, Pa.....	20,194	Iron and steel products, hosiery, silk, farm implements, brass castings
Pottsville, Pa.....	24,530	Brass, lumber, knit goods, shirts, pajamas, silk, glass, hosiery
Poughkeepsie, N. Y.....	40,478	Airport; steamboat connections; ball-bearings, cream separators
Reading, Pa.....	110,568	Airports; hosiery and hosiery machines, glass door knobs, tape
Rochester, N. Y.....	324,975	Airports; lake port; cameras, films, men's clothing
Rome, N. Y.....	34,214	Copper products, brass, wire, cable, beds, road graders
Schenectady, N. Y.....	87,549	Airport; electrical manufacturing industries, locomotive works
Scranton, Pa.....	140,404	Airports; coal, silk, lace, underwear, beds, phonograph records
Shamokin, Pa.....	18,810	Silk, cellulose products, hosiery, meat products, shirts
Sharon, Pa.....	25,622	Tin plate, wire products, steel, transformers, tank-cars, auto parts
Shenandoah, Pa.....	19,790	Underwear, shirts, confectionery, anthracite coal; dairy products
Syracuse, N. Y.....	205,967	Airport; tool steel, soda ash and by-products, wax candles, chinaware
*Trenton, N. J.....	124,697	Airports; pottery, rubber goods, cables, wire, linoleum, woollens
Troy, N. Y.....	70,304	Airport; collars, men's shirts, neckwear, abrasives, bells, knit goods
Union City, N. J.....	56,173	Silk and cotton fabrics, electrical appliances, rain-coats, embroidery
Uniontown, Pa.....	21,819	Lumber, flour, foundry castings, radiators, enamel ware, shirts
Utica, N. Y.....	100,518	Glass, cottons, worsteds, woollens, knit goods, men's clothing
Washington, Pa.....	26,166	Glass, steel, tin plate, chemicals, bricks, motor lawn mowers
Watertown, N. Y.....	33,385	Airport; air-brakes, paper, silk fabrics, thermometers, clothing
Westfield, N. J.....	18,458	Residential town; protective coatings, bituminous paint
West New York, N. J.....	39,439	Manufacturing
West Orange, N. J.....	25,662	Electrical equipment, calculating machines, hats, pot-cleaners
White Plains, N. Y.....	40,327	Valves, fittings, plumbing and heating materials, wire, cable
Wilkes-Barre, Pa.....	86,236	Airport; silk, locomotives, cigars, mining supplies, lace curtains
Wilkinsburg, Pa.....	29,853	Airport; railroad supplies, machinery, cement products, pulmotors
Williamsport, Pa.....	44,355	Airport; automobile and airplane motors, brass valves, fire hydrants
Yonkers, N. Y.....	142,598	Carpets, sugar, elevators, medicine, textiles, garments, electric cable
York, Pa.....	56,712	Airport; refrigerating machinery, bank vaults, hosiery, water turbines

SOUTH ATLANTIC CITIES

(WEST VIRGINIA, MARYLAND, DELAWARE, VIRGINIA, NORTH CAROLINA, SOUTH CAROLINA, GEORGIA, FLORIDA)

CITY	POPULATION	INTERESTING FACTS
Alexandria, Va.....	33,523	Refrigerator cars, fertilizer, men's clothing, lumber products
*Annapolis, Md.....	13,069	U. S. Naval Academy; fish, crabs, oysters, dairy products; farming
Asheville, N. C.....	51,310	Airport; rayon and cotton goods, hosiery, furniture, paper
Athens, Ga.....	20,650	Hosiery, shirts, cotton-seed products, fertilizer, cotton, corn
*Atlanta, Ga.....	302,288	Airport; textiles, furniture, flour, lumber, paper, candy
Augusta, Ga.....	65,919	Cotton cloth, fire and building brick, tile, cotton-seed-oil products
Baltimore, Md.....	859,100	Shipyards, food canning; iron, steel, copper products, chemicals
Bluefield, W. Va.....	20,641	Coal, timber, explosives, cosmetics; bottling works
Charleston, S. C.....	71,275	Seaport; navy yard; fertilizers, lumber, tobacco, textiles; canning
*Charleston, W. Va.....	67,914	Chemicals, glass, tools, paper, petroleum, iron, steel, cement
Charlotte, N. C.....	100,899	Power-plant; cotton goods, furniture, flour, tires
Clarksburg, W. Va.....	30,579	Steel, pottery, coal, glass, chemicals, tin products
*Columbia, S. C.....	62,396	Cotton textiles, foundry products, lumber, cotton-seed oil, brick, clay
Columbus, Ga.....	53,280	Textiles, shelled nuts, confectionery; foundries, meat-packing
Cumberland, Md.....	39,483	Rayon textiles, tires, glassware, boxes, coal, limestone

REFERENCE TABLES

SOUTH ATLANTIC CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Danville, Va.....	32,749	Cotton goods, tobacco, paint, lumber, grain
Daytona Beach, Fla.....	22,584	Summer and winter resort; citrus fruits, truck crops; fisheries
*Dover, Del.....	5,517	Canned goods, hosiery, paint, soft drinks, grain, fruit
Durham, N. C.....	60,195	Tobacco products, textiles, building materials, medicines, flour
Fairmont, W. Va.....	23,105	Glass, coal, coke, aluminum, cigars, fiber board
Greensboro, N. C.....	59,391	Cotton goods, hosiery; lumber mills, foundries, nurseries
Greenville, S. C.....	34,734	Textiles, peanut products, silk, wood and meat products
Hagerstown, Md.....	32,491	Furniture, leather goods, pipe-organs and supplies, paper boxes
High Point, N. C.....	38,495	Furniture, silk, tobacco, wheat, truck crops, street-cars
Huntington, W. Va.....	78,836	Glass, brick, mining machinery, drugs, hardware, furniture, textiles
Jacksonville, Fla.....	173,065	Airports; shipping; naval stores; lumber, coffee, canned foods
La Grange, Ga.....	21,983	Truck and poultry farms; textiles, lumber, beverages
Lakeland, Fla.....	22,068	Citrus-fruit packing and canning; phosphate, lumber; railroad shops
Lynchburg, Va.....	44,541	Shoes, overalls, cotton goods, drugs, lumber; tobacco warehouses
Macon, Ga.....	57,865	Airports; textiles, lumber, cotton-seed products, pottery, flour
Miami, Fla.....	172,172	Airports; winter resort; canned fruits and vegetables, furniture
Newport News, Va.....	37,067	Shipyards; machinery, steel, cotton, tobacco products, shirts, oysters
Norfolk, Va.....	144,332	Seaport; shipping; fertilizer, clothing, tanks, coffee, oysters, peanuts
Orlando, Fla.....	36,736	Winter resort; fruit-packing, coffee-roasting; turpentine, burlap
Parkersburg, W. Va.....	30,103	Rayon, sheet steel, glass, refined oils, wire, silk, lumber
Pensacola, Fla.....	37,449	Seaport; naval air station; lumber, fertilizer, beverages, fish
Petersburg, Va.....	30,631	Luggage, peanuts, woolen and tobacco products, lumber, coal, metals
Portsmouth, Va.....	50,745	Cotton, tobacco, lumber, vegetables, creosote; sea-food packing
*Raleigh, N. C.....	46,897	Textiles, lumber, tobacco, corn; dairy, truck, and poultry farms
*Richmond, Va.....	193,042	Tobacco products, iron, steel, flour, paper, rayon, luggage, cellophane
Roanoke, Va.....	69,387	Bridge steel, machinery, railroad equipment, rayon, chemicals, textiles
Rocky Mount, N. C.....	25,568	Railroad shops and roundhouse; cotton and cotton-seed oil, tobacco
Rome, Ga.....	26,282	Rayon yarn, cotton textiles, cook stoves and heaters
St. Petersburg, Fla.....	60,812	Resort; citrus fruit; concrete products
Savannah, Ga.....	95,996	Railroad shops; fisheries; resort; sugar, lumber, cotton-seed products
Spartanburg, S. C.....	32,249	Airport; textiles, mattresses, springs, hosiery, timber products
*Tallahassee, Fla.....	16,240	Pine, hardwood timber, crates, boxes, shuttle blocks; truck, dairy
Tampa, Fla.....	108,391	Airport; foreign and coastal shipping; phosphate, fiber-board boxes
West Palm Beach, Fla.....	33,693	Resort; fisheries; airports; tile, wrought-iron, sheet-metal
Wheeling, W. Va.....	61,099	Glass, paper, pottery, packed meat, textiles; steel mills, blast furnaces
Wilmington, Del.....	112,504	Airport; chemicals, explosives, leather products, textiles
Wilmington, N. C.....	33,407	Airport; export trade in cotton, lumber, peanuts
Winston-Salem, N. C.....	79,815	Tobacco, air-conditioning machinery, foundry products, awnings
WASHINGTON, D. C.....	663,091	National Capitol and government offices; paper, steel

SOUTH CENTRAL CITIES

(KENTUCKY, TENNESSEE, ALABAMA, MISSISSIPPI, LOUISIANA, ARKANSAS, OKLAHOMA, TEXAS)

CITY	POPULATION	INTERESTING FACTS
Abilene, Tex.....	26,612	Cotton-seed products; oil refinery; grain-elevators
Alexandria, La.....	27,066	Cotton, corn, sugar-cane, chemicals; meat-packing, coffee-roasting
Amarillo, Tex.....	51,686	Airport; oil refinery, zinc smelter; wheat, grain-sorghums, corn
Anniston, Ala.....	25,523	Net, twine, bolts, nuts, chemicals, cotton, corn, hay
Ashland, Ky.....	29,537	Steel, coal, coke; stone, lumber; gas wells, oil refining
*Austin, Tex.....	87,930	Cattle, cotton, wool; foundries; machine-shops; crude-oil engines
*Baton Rouge, La.....	34,719	Oil refining, food packing, rice milling; foundry products, sulphur
Beaumont, Tex.....	59,061	Airport; oil, cotton, rice, foundry products, timber; oil-wells
Bessemer, Ala.....	22,826	Iron-ore, limestone, pine and hardwood timber, cotton
Birmingham, Ala.....	267,583	Airports; limestone, lumber, cement, coal, iron ore
Bristol, Va.-Tenn.....	9,768	Confectionery, hosiery, drugs, lumber, coal, iron, granite, marble
Brownsville, Tex.....	22,083	Resort; brick, tile, cotton-seed oil, vegetables, citrus fruits; fisheries

SOUTH CENTRAL CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Chattanooga, Tenn.....	128,163	Airport; historic battle-fields; mountain resort; textiles, iron, coal
Corpus Christi, Tex.....	57,301	Airport; cotton-seed-oil products, chemicals, seafood; oil refineries
Covington, Ky.....	62,018	X-ray equipment, sheet-metal and paper products; railroad shops
Dallas, Tex.....	294,734	Airports; oil, cotton, textiles, sheet-metal, food products
El Dorado, Ark.....	15,858	Cotton-seed oil, refined petroleum, asphalt; railroad shops; bottling
El Paso, Tex.....	96,810	Airports; copper, silver, lead, zinc, gold; cattle raising
Enid, Okla.....	28,081	Airport; oil-wells, meat-packing plants, railroad shops
Fort Smith, Ark.....	36,584	Airport; manufacturing and distributing center; zinc, coal, hardwood
Fort Worth, Tex.....	177,662	Airport; important grain and live-stock market; gas- and oil-wells
*Frankfort, Ky.....	11,492	Lumber, flour, twine, tobacco, stone; dairy and stock farms
Gadsden, Ala.....	36,975	Iron and steel mills; iron ore and coal mines; pine, hardwood
Galveston, Tex.....	60,862	Airports; seaport; exports cotton products, grain, sulphur; fisheries
Hattiesburg, Miss.....	21,026	Lumber products, yellow-pine lumber, cotton
Hot Springs, Ark.....	21,370	Health resort; mineral springs; pine and oak timber
Houston, Tex.....	384,514	Airports; shipping; cotton, wool, rice, lumber, petroleum products
*Jackson, Miss.....	62,107	Airport; cotton-seed-oil manufacturing and distributing center
Jackson, Tenn.....	24,332	Railroad shops; foundries; cotton and cotton-seed oil mills; lumber
Johnson City, Tenn.....	25,332	Feldspar, mica, limestone, sand, gravel, hardwood timber
Knoxville, Tenn.....	111,580	Airports; railroad shops, iron, marble, and cement works; coal
Laredo, Tex.....	39,274	Airport; tourist center; vegetables, fruit; hard-coal mines
Laurel, Miss.....	20,598	Railroad shops; meat-packing plant; lumber, fertilizers, cotton cloth
Lexington, Ky.....	49,304	Airport; horses, blue-grass seed, tobacco, oil, coal; quarrying
*Little Rock, Ark.....	88,039	Airport; railroad shops; crushed stone; bauxite mines, oil-wells
Louisville, Ky.....	319,077	Airport; paint, varnish, barrels, cement, metal products, phosphate
Lubbock, Tex.....	31,853	Dairy and poultry products, grain-sorghums, cotton
Memphis, Tenn.....	292,942	Airport; cotton, hardwood, cotton-seed, mixed feed products
Meridian, Miss.....	35,481	Airport; saw, planing, feed, and hosiery mills, machine-shops
Mobile, Ala.....	78,720	Seaport; cotton, lumber, coal, tobacco, citrus fruit, petroleum
Monroe, La.....	28,309	Airport; paper, paper bags, oak flooring, barrels and kegs; gas-wells
*Montgomery, Ala.....	78,084	Airports; industrial center; live-stock market; lumber products
Muskogee, Okla.....	32,332	Airport; oil- and gas-wells; brick-yards; oil refineries; cotton-gins
*Nashville, Tenn.....	167,402	Airports; flour, stock-feed, cottons, woolens, soft coal, manganese
New Orleans, La.....	494,537	Airports; seaport; cotton, sugar, lumber, dairy products, rice
Newport, Ky.....	30,631	Sheet steel, culverts, roofing, coal
North Little Rock, Ark.....	21,137	Cotton-seed-oil products, fertilizer, timber, agricultural products
*Oklahoma City, Okla.....	204,424	Airports; packed meat, cotton-seed oil, oil-well supplies, brick
Owensboro, Ky.....	30,245	Tobacco, clay products, furniture, electrical supplies
Paducah, Ky.....	33,765	Airport; barrels and kegs, brick, tile, shoes, buttons, baskets, harness
Pine Bluff, Ark.....	21,290	Cotton, lumber, cotton-seed oil, oak flooring
Port Arthur, Tex.....	46,140	Airport; seaport; ship-building; asphalt, sulphur, and tobacco plants
San Angelo, Tex.....	25,802	Distributing center; wool, cotton-seed oil, live stock; oil refineries
San Antonio, Tex.....	253,854	Flying school; leather products, cotton-seed oil, soap; refineries
Selma, Ala.....	19,834	Cotton, corn, oak timber
Shawnee, Okla.....	22,053	Railroad shops; cotton-gins; cotton-seed-oil mills; flour, cheese
Shreveport, La.....	98,167	Airports; gas, window glass, cotton-seed oil, iron, steel
Tulsa, Okla.....	142,157	Airports; oil-field and railroad supplies, petroleum, glass, steel
Tuscaloosa, Ala.....	27,493	Paper, lumber products, cast-iron pipe, condensed milk, cotton, corn
Tyler, Tex.....	28,279	Oil refineries, nurseries; peanut products, shelled pecans, syrup
Vicksburg, Miss.....	24,460	Cotton-seed-oil products, packing boxes, barrels and kegs, lumber
Waco, Tex.....	55,982	Airport; textiles, syrup, furniture, condensed milk, butter, tents
Wichita Falls, Tex.....	45,112	Airport; refined-oil products, flour, oil-field machinery, glass

NORTH CENTRAL CITIES

(OHIO, INDIANA, ILLINOIS, MICHIGAN, WISCONSIN, MINNESOTA, NORTH DAKOTA,
SOUTH DAKOTA, IOWA, NEBRASKA, KANSAS, MISSOURI)

CITY	POPULATION	INTERESTING FACTS
Akron, O.....	244,791	Rubber goods, cereals, steel products, clay products, dirigibles
Alliance, O.....	22,405	Pottery, heavy milling machinery; coal mines
Alton, Ill.....	31,255	Flour, glass containers, brick, shoes, steel, lumber, cartridges, boats
Anderson, Ind.....	41,572	Steel, wire, pumps, tile, stoves, oil engines, playground equipment
Ann Arbor, Mich.....	29,815	State University; airport; ball-bearings, radios, lawn sprinklers
Appleton, Wis.....	28,436	Airport; paper, paper products, wire, furniture, woolen felts, lumber
Ashtabula, O.....	21,405	Exports coal and iron-ore; shipyards, tanneries, foundries
Aurora, Ill.....	47,170	Airport; railroad coaches, road-making machinery, dairy products
Barberton, O.....	24,028	Chemicals, matches, valves, rubber specialties, high-tension insulators
Battle Creek, Mich.....	43,453	Airport; cereal products, printing-presses, threshing machines
Bay City, Mich.....	47,956	Airport; ready-cut houses, electric transformers, furniture; shipyards
Belleville, Ill.....	28,405	Airports; stoves, shoes, pants, shirts, brick, chemicals, flour
Beloit, Wis.....	25,365	Paper-making and wood-working machinery, shoes, neon tubes
Berwyn, Ill.....	48,451	Residential suburb of Chicago; brick-yard
*Bismarck, N. D.....	15,496	Butter, binding twine, stock feeds, heating plants; highway markets
Bloomington, Ill.....	32,868	Airport; railroad shops; oil heaters, electric refrigerators
Bloomington, Ind.....	20,870	State University; furniture, limestone, baskets, plate-glass, gloves
Burlington, Iowa.....	25,832	Airport; soap, furniture, stationery, engines, candy, biscuits, gloves
Canton, O.....	108,401	Airport; iron and steel products, cutlery, safes, Diesel engines
Cedar Rapids, Iowa.....	62,120	Airport; cereal, syrup, dairy and road machinery, containers
Champaign, Ill.....	23,302	State University; bleachers, castings, chemicals, concrete culverts
Chicago, Ill.....	3,396,808	Airports; railroads; live stock, grain, furniture, farm implements
Chicago Heights, Ill.....	22,461	Airport; steel, glass containers, locomotives, soap, textiles
Chillicothe, O.....	20,129	Paper, shoes, canned foods, furniture, optical goods, flour
Cicero, Ill.....	64,712	Telephones, washing-machines, enamel ware, rubber, asbestos, brass
Cincinnati, O.....	455,610	Airports; iron, steel, lithographic and printing equipment
Cleveland, O.....	878,336	Airports; seaport; iron, steel, copper, tin, refrigerators, clothing
Clinton, Iowa.....	26,270	Corn products, window sash, doors, furniture, pearl buttons, games
*Columbus, O.....	306,087	Airports; foundries, machine-shops, meat-packing plants
Council Bluffs, Iowa.....	41,439	Airport; cereals, bee supplies, elevators, animal foods, serums, candy
Cuyahoga Falls, O.....	20,546	Rubber machinery, rubber goods, paper boxes, tools, lumber
Danville, Ill.....	36,919	Airport; brick, zinc, sulphuric acid, paper boxes, butter, candy
Davenport, Iowa.....	66,039	Airport; farm implements, washing-machines, military equipment
Dayton, O.....	210,718	Airports; experimental flying-field; tires, cash-registers
Dearborn, Mich.....	63,584	Automobiles, seamless tubing, drive shafts, brick
Decatur, Ill.....	59,305	Airport; starch, corn syrup, flour, brass goods, steel tanks, wall-paper
*Des Moines, Iowa.....	159,819	Airport; insurance and publishing center; flour, cosmetics, furnaces
Detroit, Mich.....	1,623,452	Airports; seaport; automobiles, airplanes, calculating machines
Dubuque, Iowa.....	43,892	Airport; sashes and doors, blinds, kitchen cabinets, clothing, batteries
Duluth, Minn.....	101,065	Airports; lake port; iron ore, flour, wool, hides, steel, dairy products
East Chicago, Ind.....	54,637	Lake port; steel mills, foundries, oil refineries; meat packing
East Liverpool, O.....	23,555	Pottery, brick, sewer pipe, cartons, barrels; coal mines, gas-wells
East St. Louis, Ill.....	75,609	Airports; meat, cereals, boxes, paint, fencing, chemicals
Eau Claire, Wis.....	30,745	Airport; tires, tubes, paper, culverts, aluminum ware, furniture
Elgin, Ill.....	38,333	Watches, watchcases, dairy products, garments, shoes, thread, tools
Elkhart, Ind.....	33,434	Airport; hand instruments, brass, trailers, rubber products
Elyria, O.....	25,120	Chemicals, small wheeled vehicles, glass-lined steel equipment
Evanston, Ill.....	65,389	Brick, cosmetics, toys, screens, cookie pans, cutting lubricants
Evansville, Ind.....	97,062	Airport; flour, farm implements, excavating machinery, chemicals
Fargo, N. D.....	32,580	Airport; flour, fur coats, jewelry, luggage, neon signs
Ferndale, Mich.....	22,523	Steel tubing, automobile polish and wax, dies, iron castings, shellac
Findlay, O.....	20,228	Oil, beet sugar, tires, tubes, gloves, ditching machinery
Flint, Mich.....	151,543	Automobiles and accessories, dairy products, business machines, paint
Fond du Lac, Wis.....	27,209	Airport; cheese-factory equipment, infants' stockings, gloves, furniture
Fort Dodge, Iowa.....	22,904	Gypsum and lime products, serums, brick, tile, fireworks, flour
Fort Wayne, Ind.....	118,410	Airports; electrical motors, trucks, oil pumps, hosiery
Freeport, Ill.....	22,366	Toys, batteries, patent medicines, farm machinery, oil-burners

NORTH CENTRAL CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Galesburg, Ill.....	28,876	Airport; engines, boilers, automobile parts, paint, railway equipment
Gary, Ind.....	111,719	Airport; iron and steel mills; alloys, coke, ammonium sulphate, tar
Grand Island, Neb.....	19,130	Horse and mule market; creamery; beet sugar, stock foods
Grand Rapids, Mich.....	164,292	Airport; furniture, veneers, varnish, paint, carpet sweepers, excelsior
Granite City, Ill.....	22,974	Railway equipment, oxygen and nitrogen products, enamel ware
Green Bay, Wis.....	46,235	Airport; steamboat connections; paper, cranes, gloves, lumber products
Hamilton, O.....	50,592	Airport; paper products, safes, Diesel engines, cranes
Hammond, Ind.....	70,184	Oil refineries; passenger- and freight-cars, hospital equipment, pianos
Hamtramck, Mich.....	49,839	Automobiles, spark-plugs, steel tubing, paint
Hannibal, Mo.....	20,865	Steamboat connections; shoes, cement, steel, foundry supplies, stoves
Harvey, Ill.....	17,878	Drop-forgings, steel castings, railroad supplies, road machinery
Hastings, Neb.....	15,145	Automobile accessories, hardware, brick, tile, butter, flour
Highland Park, Mich.....	50,810	Residential suburb; automobiles
Hutchinson, Kans.....	30,013	Airport; grain-elevators, flour mills; salt, fiber products, candy
*Indianapolis, Ind.....	386,972	Airports; automobile parts, paper, food products, furniture
Iowa City, Iowa.....	17,182	Advertising novelties, metal and stone products; creameries
Jackson, Mich.....	49,656	Airport; railroad shops; automobile parts, electric refrigerators, radios
Jacksonville, Ill.....	19,844	Men's clothing, shoes, steel bridges, wire novelties, cigars
Janesville, Wis.....	22,992	Automobiles, automobile bodies, fountain-pens, clothing, woolen goods
*Jefferson City, Mo.....	24,268	Shoes, clothing, brooms, paper boxes, beverages, flour, tire chains
Joliet, Ill.....	42,365	Airport; wall-paper, wire, roofing, calendars, chemicals, gas ranges
Joplin, Mo.....	37,144	Airport; lead, zinc, barrels and kegs, bakery products, mattresses
Kalamazoo, Mich.....	54,097	Airport; paper, furnaces, water heaters, stoves, fishing-tackle
Kankakee, Ill.....	22,241	Furniture, stoves, hosiery, brick, tile, paint, machinery, mattresses
Kansas City, Kans.....	121,458	Airport; flour mills; soap, fiber boxes, cement, creamery products
Kansas City, Mo.....	399,178	Airports; meat packing; grain markets; flour, steel, soap
Kenosha, Wis.....	48,765	Airport; automobiles, steel beds, hosiery, underwear, wire rope
Kokomo, Ind.....	33,795	Airport; wire, fencing, nails, spark-plugs, radios, cutlery, road signs
LaCrosse, Wis.....	42,707	Rubber footwear, automobile supplies, shoes, candy, crackers, buttons
Lafayette, Ind.....	28,798	Airports; meat packing; gears, tools, soap, paper boxes, wire
Lakewood, O.....	69,160	Road-building machinery, dry batteries
Lancaster, O.....	21,940	Glass, shoes, lenses, farm machinery
*Lansing, Mich.....	78,753	Airport; automobiles, Diesel engines, awnings, tents, chewing-gum
Leavenworth, Kans.....	19,220	Ice machinery, stoves, flour, bridges, furniture, gloves, corn-meal
Lima, O.....	44,711	Locomotives, Diesel engines, cigars, cheese, clothing, woolens
*Lincoln, Neb.....	81,984	Airports; railroad cars, flour, gas engines, brick, tile, harness
Lorain, O.....	44,125	Airport; harbor; automatic shovels, steel ships, stoves, clothing
*Madison, Wis.....	67,447	Airports; dry-cell batteries, chemicals, valves, tobacco products
Manitowoc, Wis.....	24,404	Aluminum ware, boxes, cement, metal furniture, cheese, vinegar
Mansfield, O.....	37,154	Airport, electrical appliances, tires, tubes, bed springs, mattresses
Marion, Ind.....	26,476	Airport; glass and paper products, boxes, gloves, cable, radio cabinets
Marion, O.....	30,817	Airport; dredges, threshing machines, tractors, road rollers, silk
Mason City, Iowa.....	27,080	Beet sugar, cement, brick, tile, batteries, barrels
Massillon, O.....	26,644	Marine and heating equipment, aluminum, advertising signs, clothing
Maywood, Ill.....	26,648	Water softeners, branding irons; bottling works, nursery
Michigan City, Ind.....	26,476	Airport; railroad cars, mining machinery, furniture, gloves, shirts
Middletown, O.....	31,220	Airport; steel, paper, tobacco, culverts, cabinets
*Milwaukee, Wis.....	587,472	Airports; automobile bodies, heavy machinery, shoes, paint
Minneapolis, Minn.....	492,370	Airport; linseed-oil, clothing, furniture, animal and poultry feeds
Minot, N. D.....	16,577	Creamery, bakery, and concrete products, flour, cereals
Mishawaka, Ind.....	28,298	Airport; rubber and woolen footwear, rain-coats
Moline, Ill.....	34,608	Airport; malleable iron and brass foundries; agricultural implements
Monroe, Mich.....	18,478	Paperboard, boxes, steel office furniture, shock-absorbers, stokers
Muncie, Ind.....	49,720	Airport; fruit jars, fencing, silverware, wire, lawn mowers
Muskegon, Mich.....	47,697	Airport; airplane parts, washing-machines, refrigerators
New Albany, Ind.....	25,414	Veneer, plywood, clothing, stoves, furniture, leather, glue
Newark, O.....	31,487	Airports; stoves, furniture, golf-clubs and balls, glassware
Norwood, O.....	34,010	Automobiles, trucks, chemicals, cigar molds, mattresses, varnish

NORTH CENTRAL CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Oak Park, Ill.	66,015	Food products, veneer machinery, tools, dies, transformers, candy
Omaha, Neb.	223,844	Airports; oil refineries; meat packing; flour, butter, airplanes
Oshkosh, Wis.	39,089	Airport; tools, barn equipment, matches, doors and sashes, furniture
Ottumwa, Iowa	31,570	Airport; meat packing; mining equipment, lawn mowers, candy, cigars
Peoria, Ill.	105,087	Airports; tractors, alcohol, tile, chemicals, barrels and kegs
*Pierre, S. D.	4,322	Stock, dairy, poultry, grain
Pontiac, Mich.	66,626	Airport; automobiles, airplanes, dairy products, iron, rubber
Port Huron, Mich.	32,759	Airport; copper wire, brass, salt, paper, cement, airplanes
Portsmouth, O.	40,466	Airport; fire-brick, gas-engines, shoes, heels, spats, paper boxes
Quincy, Ill.	40,469	Airport; elevators, furnaces, office furniture, store fixtures
Racine, Wis.	67,195	Airports; floor wax, camp furniture, farm implements
Richmond, Ind.	35,147	Airport; lawn mowers, farm implements, school-bus bodies
Rochester, Minn.	26,312	Hospitals; butter, cosmetics, drug products, oil-burners
Rockford, Ill.	84,637	Airport; machine tools, piston-rings, furniture, hosiery, mittens
Rock Island, Ill.	42,775	Farm implements, lumber, rubber footwear, farm lighting plants
Royal Oak, Mich.	25,087	Lumber-yards, tool factory, creamery; poultry; fruit, and truck farms
Saginaw, Mich.	82,794	Airport; automobile parts, machinery, furniture, graphite, rules
St. Cloud, Minn.	24,173	Granite monuments, freight-cars, paper, sausage, canned vegetables
St. Joseph, Mo.	75,711	Airport; flour, packing-house products, candy, feed, structural steel
St. Louis, Mo.	816,048	Airports; horse, mule, hog, and grain market, fur market
Salina, Kans.	21,073	Flour mills, packing, brick, and tile plants, hatcheries; truck bodies
*St. Paul, Minn.	287,736	Airport; fur market; meat-packing and railroad-car plants
Sandusky, O.	24,874	Excellent harbor; trade in fish, coal, stone, cement, sand, paper
Sedalia, Mo.	20,428	Disinfectants, butter, cheese, shirts, dresses, overalls
Sheboygan, Wis.	40,638	Airport; furniture, enamel ware, shoes, gloves, cheese, toys
Sioux City, Iowa	83,364	Airport; meat packing; tools, trucks, tractors, flour, butter
Sioux Falls, S. D.	40,832	Airport; meat products, crackers, cigars, farm machinery, soap
South Bend, Ind.	101,268	Airport; automobiles, calendars, brakes, shirts, farm equipment
*Springfield, Ill.	75,503	Airport; tractors, electric meters, clocks, radio parts, shoes, flour
Springfield, Mo.	61,238	Airport; railroad shops, creameries; lime, cement, clothing, furniture
Springfield, O.	70,662	Airport; farm implements, gas- and steam-engines, thermometers
Steubenville, O.	37,651	Iron, glass, pottery, steel, tin, brick, wall-paper, tile, confectionery
Superior, Wis.	35,136	Airport; chairs, railroad engines and cars, flour, coal briquettes
Terre Haute, Ind.	62,693	Airport; enamel ware, vitrified brick, tile, dog food, garments
Toledo, O.	282,349	Airports; ships, grain, iron ore, coal, lumber, live stock
*Topeka, Kans.	67,833	Airport; flour mills; creamery products, tents, awnings, wash dresses
Waterloo, Iowa	51,743	Airports; meat packing; cream separators, gas-engines
Waukegan, Ill.	34,241	Airport; harbor; leather-working machines, asbestos products
Wausau, Wis.	27,268	Paper, veneer, electric motors, batteries, roofing granules, shoes
Wauwatosa, Wis.	27,769	Leather, chemicals, lumber; bottling works, iron foundry
West Allis, Wis.	36,364	Motors, steel tanks, pistons, power shovels, cultivators, tools
Wichita, Kans.	114,966	Airports; oil refining; grain-elevators; airplanes, petroleum
Winona, Minn.	22,490	Flour, fur coats, hosiery, boxes, cartons, knit goods, fiber board
Wyandotte, Mich.	30,618	Steel, chemicals, toys, trunks, cement, salt, stoves
Youngstown, O.	167,720	Airports; steel furniture, brass and bronze castings, brick
Zanesville, O.	37,500	Airport; tile, pottery, iron radiators, china, brick, shoes, slippers

WESTERN CITIES

(MONTANA, IDAHO, WASHINGTON, OREGON, CALIFORNIA, ARIZONA, NEW MEXICO,
COLORADO, NEVADA, UTAH, WYOMING)

CITY	POPULATION	INTERESTING FACTS
Aberdeen, Wash.	18,846	Seaport; lumber, cereals, pulp, paper, fish, beverages, saws
Alameda, Calif.	36,256	Airports; shipyards; pumps, Diesel engines, paints, boxes
Albuquerque, N. M.	35,449	Airports; lumber, woolen goods, treated railroad ties
Alhambra, Calif.	38,935	Airport; steel, dairy products, engines, sprinklers, roofing
Bakersfield, Calif.	29,252	Airport; oil refineries; pumps, creamery products, paint; citrus-fruit
Bellingham, Wash.	29,314	Airport; harbor; shingles, lumber, cereals, confectionery, cement

WESTERN CITIES—Continued

CITY	POPULATION	INTERESTING FACTS
Berkeley, Calif.	85,547	Airport; University of California; cocoanut oil, paint, soap, ink
Beverly Hills, Calif.	26,823	Gas furnaces, sashes and doors, varnish, candy, custom-made shirts
*Boise, Idaho.	26,130	Furniture, feed, flour, electric signs, candy, lumber, rugs, mattresses
Burbank, Calif.	34,337	Airplanes, food products, motor trucks, water heaters, refrigerators
Butte, Mont.	37,081	Airport; copper mining and smelting, silver mining, meat packing
*Carson City, Nev.	2,478	Railroad shops; United States mint; gold, silver, and copper mines
Casper, Wyo.	17,964	Railroad shops, bakeries, creamery; meat packing; potato chips
*Cheyenne, Wyo.	22,474	Doors, paint, farm implements; meat packing; oil refineries
Colorado Springs, Colo.	36,789	Airports; advertising film, granite, dairy, clay, leather products
*Denver, Colo.	322,412	Airports; canned vegetables and fruit, rubber goods, gas meters
Eugene, Ore.	20,838	Woolen and lumber mills, fruit and vegetable canneries; U. of Oregon
Everett, Wash.	30,224	Airport; lumber, cedar shingles, paper, sawmill machinery
Fresno, Calif.	60,685	Airport; dried raisins, peaches and figs, neon lights, cotton-seed
Glendale, Calif.	82,582	Airport; clay, dairy, glass, and vegetable products, baskets, boxes
Great Falls, Mont.	29,928	Airport; copper and zinc smelters; meat packing; copper wire, flour
*Helena, Mont.	15,056	Brick and tile works; gold, silver; concrete pipe
Huntington Park, Calif.	28,648	Oil-well supplies, fire-brick, men's clothing, paint, varnish
Inglewood, Calif.	30,114	Furniture, oil-well supplies, airplanes, microphones, enamel ware
Long Beach, Calif.	164,271	Airport; harbor; sardine, tuna, and mackerel canneries; soap, paint
Los Angeles, Calif.	1,504,277	Airports; motion-picture center; automobiles, steel, beverages
Oakland, Calif.	302,163	Airport; seaport; automobiles, canned and packed fruit and meat
Ogden, Utah.	43,688	Airport; flour and knitting mills; brooms, confectionery, tile, iron
*Olympia, Wash.	13,254	Veneer, shingles, knitted wear, lumber, plywood, extracts, beverages
Pasadena, Calif.	81,864	Furniture, scientific apparatus, plumbing material, paint, sweaters
*Phoenix, Ariz.	65,414	Airport; cotton-seed products, brick, brooms, flour, mattresses
Pomona, Calif.	23,539	Canned fruit, paper, tile, pumps, slicers, orchard heaters
Portland, Ore.	305,394	Airport; lumber, furniture, paper products, woolen goods, blankets
Pueblo, Colo.	52,162	Brick, tile, brooms, butter, plumbing supplies, tents, awnings
Reno, Nev.	21,317	Shipping center for wool, potatoes, cattle, sheep; flour, cereals
Richmond, Calif.	23,642	Harbor; clay products, spray chemicals, fish oil, canned fruit; sardines
Riverside, Calif.	34,696	Airports; citrus-fruit and olive packing; cement, spraying equipment
*Sacramento, Calif.	105,958	Airport; oil refining, fruit canning, meat packing, rice cleaning
*Salem, Ore.	30,908	Airport; paper, woolen, and linen goods, twine, flax, lumber, fruits
*Salt Lake City, Utah.	149,934	Airport; petroleum products, car wheels, copper, silver, lead, zinc
San Bernardino, Calif.	43,646	Airport; color-comic printing; cement, dresses, refrigerator cars
San Diego, Calif.	203,341	Airports; harbor; fish canning; canned and dried fruit, paint
San Francisco, Calif.	634,536	Airport; seaport; graphite, paper, tobacco, matches, mattresses
San Jose, Calif.	68,457	Airports; playground equipment, fruit and fish cans, pottery
Santa Ana, Calif.	31,921	Airport; sugar, dried fruits, chili products, spraying equipment
Santa Barbara, Calif.	34,958	Airport; plumbers' supplies, glass, paint, dairy products
*Santa Fe, N. M.	20,325	Piñon nuts, Mexican and Indian curios, hand-made cravats
Santa Monica, Calif.	53,500	Airport; airplanes, roofing tile, Venetian blinds, soap, chemicals
Seattle, Wash.	368,302	Airports; harbor; steel, textiles, lumber, paper, flour, airplanes
South Gate, Calif.	26,945	Automobiles, tires, fiber-board products, gasoline pumps, chemicals
Spokane, Wash.	122,001	Airport; farm and road-making machinery, paper, lumber, flour
Stockton, Calif.	54,714	Airports; farm machinery, paint, pumps, macaroni, brick
Tacoma, Wash.	109,408	Airports; seaport; lumber, pulp, paper, chemicals, furniture, flour
Tucson, Ariz.	36,818	Airport; brick, tile, flour, paint, mattresses, glass, brooms, sausage
Walla Walla, Wash.	18,109	Vinegar, concrete, meat products, brick; canneries, fish hatchery
Yakima, Wash.	27,221	Lumber, flour, vinegar, candy, sprayers, clay products

OTHER NEW WORLD CITIES

ALASKA

Cities that are starred are capitals.

CITY	POPULATION	INTERESTING FACTS
Fairbanks.	3,455	Gold, coal, vegetables; fur farms
*Juneau.	5,729	Seaport; canning; truck farms; gold, silver, furs, lumber
Ketchikan.	4,695	Shipping, salmon canning; cold-storage plants; lumber

REFERENCE TABLES

CANADA

Abbreviations used here for the Canadian provinces are: Alberta, Alta.; British Columbia, B. C.; Manitoba, Man.; New Brunswick, N. B.; Nova Scotia, N. S.; Ontario, Ont.; Prince Edward Island, P. E. I.; Quebec, Que.; Saskatchewan, Sask.

CITY	POPULATION	INTERESTING FACTS
Brandon, Man.	17,082	Oil refineries; meat packing; grain, farm implements, leather
Calgary, Alta.	83,407	Oil refineries; meat packing; woodworking, grain, lumber
Charlottetown, P. E. I.	12,361	Farm and dairy products, fish, furs, flour, fertilizer
Edmonton, Alta.	85,774	Meat packing, garment making; lumber, coal, boxes, paint
Fredericton, N. B.	8,830	Farm products, shoes, clay; lumber mills, brick foundries
Halifax, N. S.	59,275	Airport; seaport; shipyards; sugar and oil refineries; dried fruit
Hamilton, Ont.	165,000	Steel, textiles, electrical appliances, glass, tires, machinery
Kingston, Ont.	23,439	Shipping, meat packing; woolen mills; grain, leather, brick
London, Ont.	83,000	Publishing; steel, brass, enamel ware, hosiery, wines, leather
Montreal, Que.	900,000	Retail center; ship-building; automobiles, oil refineries, flour
*Ottawa, Ont.	168,377	Lumber, clothing, machinery, paper, cement, currency
Quebec, Que.	144,727	Paper, shoes, candy, drugs, clothing; foundries; woodworking
Regina, Sask.	53,389	Oil refineries, breweries; meat packing; chemicals, wood products
St. John, N. B.	47,514	Dry-docks; hides, furs, fish, sheet-metal, glass, lumber
*St. John's, Newfoundland. .	41,500	Seaport; marine supplies, fish, oil, paper
Saskatoon, Sask.	41,606	Meat packing; cereals, wood products, machinery, beverages
Sydney, N. S.	23,089	Seaport; steel, coal
Toronto, Ont.	631,207	Transportation center; meat packing; machinery, lumber, automobiles
Vancouver, B. C.	290,816	Seaport; canned fish, wood products, mining equipment, copper
Victoria, B. C.	61,216	Shipyards; grain-elevators, canneries; lumber, cement, paint
Winnipeg, Man.	218,785	Electric power-plants; meat packing; dairy products, minerals

CENTRAL AMERICA

CITY	POPULATION	INTERESTING FACTS
*Belize, Br. Honduras.	16,687	Mahogany, cedar, bananas, chicle, copra, sugar-cane
Colón, Panama.	66,448	Seaport; bananas, pineapples, coconuts, balata, hardwood, dyewood
*Guatemala, Guatemala.	164,771	Coffee, corn, beans, dairy products, hosiery, cigarettes; tanneries
*Managua, Nicaragua.	115,000	Distributing center; coffee, cattle, corn, dyewood, shoes
*Panamá, Panama.	127,573	Pineapples, bananas, beverages, furniture, shoes
*San José, Costa Rica.	70,568	Coffee, cacao, sugar-cane, shoes, textiles
*San Salvador, Salvador.	102,316	Coffee, rice, sugar, tobacco, hides, cotton, silk, beer, corn
*Tegucigalpa, Honduras.	34,900	Distributing center; gold, silver, farm products

MEXICO

CITY	POPULATION	INTERESTING FACTS
Aguascalientes.	62,244	Thermal springs; cotton and flour mills; tobacco, pottery
Campeche.	16,000	Seaport; sisal, hides, fruit, chicle, fish, salt
Chihuahua.	45,595	Smelting; cereals, lumber, gold, silver, lead, cattle, textiles
Guadalajara.	179,556	Tanneries; grain, sugar, gold, silver, lumber, textiles, flour
León.	69,403	Mining, stock raising; textiles, cereals, chicle, fruit, chili
Mérida.	95,015	Flour, tobacco, peanuts, sisal, gum, cattle, sugar, tile
*México, D.F.	1,029,068	Flour, clothing, chemicals, canned goods, leather; woodworking
Monterrey.	132,577	Smelting; iron, gold, silver, beverages, glass, furniture, textiles
Puebla.	114,793	Textiles, tile, grain, fruit, sugar, glass, vegetables
San Luis Potosí.	74,003	Tanneries, railroad shops; flour, silver, gold, lead, cloth
Tampico.	68,126	Railroad terminal; petroleum, sisal, fruit, vegetables
Veracruz.	67,801	Seaport; flour, textiles, chocolate, cigars, vanilla, dye, sugar

PACIFIC ISLANDS

Abbreviations used below are: Philippine Islands, P. I.; Territory of Hawaii, T. H.

CITY	POPULATION	INTERESTING FACTS
Hilo, T. H.	16,700	Seaport; sugar, flour, rice, fish, coffee, vegetables
*Honolulu, T. H.	154,476	Seaport; pineapples, sugar, machinery, tobacco, coffee, sisal
Iloilo, P. I.	88,203	Distributing center; sugar, fish, copra, rice, fruit, poultry
*Manila, P. I.	623,362	Seaport; rice, furniture, embroidery, copra, hemp, sugar, cigars
*Pago Pago, Samoa.	1,000	Coaling and naval station; copra, fruit, lumber

SOUTH AMERICA

CITY	POPULATION	INTERESTING FACTS
Antofagasta, Chile.	53,591	Silver, nitrates, borax, copper, iodine; breweries
Arequipa, Peru.	70,000	Grain, alpaca, hides, gold, silver, straw hats; cotton weaving
*Asunción, Paraguay.	107,010	Sugar refineries, tanneries; matches, furniture, cigarettes, shoes
Bahía Blanca, Argentina.	108,310	Seaport; meat packing; lumber, wool, farm and dairy products
Barranquilla, Colombia.	152,348	Cotton, hides, furniture, perfume, cigarettes, flour, brick; foundries
Belém, Brazil.	303,740	Sawmills, machine-shops; rubber, rice, sugar, cotton, nuts
*Bogotá, Colombia.	330,312	Chocolate, tobacco, glass, porcelain, flour, cement, furniture, cotton
*Buenos Aires, Argentina.	2,317,755	Seaport; wheat, linseed, dairy products, cattle, steel, tobacco
Cartagena, Colombia.	84,987	Seaport; sugar, crude oil, platinum, gold, lumber, tobacco
*Caracas, Venezuela.	203,342	Coffee, hides, rubber, medicinal plants, pearls, sugar, feathers
*Cayenne, Fr. Guiana.	10,744	Hardwood, gold, sugar, coffee, cacao, balata
Cusco, Peru.	40,000	Wool, hides, rubber, gold, cacao, cocaine, flour; foundries
*Georgetown, Br. Guiana.	67,584	Seaport; brass ware, gold, silver, sugar, diamonds, bauxite
Guayaquil, Ecuador.	180,000	Seaport; fish, sugar, coffee, cotton, wool, lumber, hides
*La Paz, Bolivia.	200,000	Cotton, wool, tin, flour, potatoes, paper, tiles, soap
La Plata, Argentina.	190,577	Meat packing; foundries; petroleum, grain
*Lima, Peru.	284,839	Cotton, wool, grain, soda-water, brooms, cement, coffee
Manaus, Brazil.	91,298	Rubber, brazil nuts, lumber, aromatic plants, cacao, soap
Maracaibo, Venezuela.	110,010	Petroleum, coffee, sugar, salt, maize, cotton, hides, furniture
Medellín, Colombia.	168,266	Gold, silver, iron, coffee, hides, rubber, cotton, tobacco
*Montevideo, Uruguay.	692,796	Packing; flour, textiles, hides, glass, paper, fruit, cement
*Paramaribo, Surinam.	51,554	Seaport; balata, sugar, gold, cacao
Porto Alegre, Brazil.	352,068	Seaport; foundries; wool, lumber, maize, cattle, lard
*Quito, Ecuador.	150,000	Textiles, cattle, cereals, lace, ivory carving, embroidery
Recife, Brazil.	510,102	Seaport; tanning, distilling; sugar, cotton, coffee, tobacco
*Rio de Janeiro, Brazil.	1,801,784	Seaport; packing plants; ship-building; flour, textiles, furniture
Rosario, Argentina.	504,000	Flour, leather, quebracho, chemicals, hay, wool, leather, glass
Santa Fé, Argentina.	131,404	Flour, dairy products, quebracho extract, cattle, furniture
*Santiago, Chile.	696,231	Copper, silver, fruit, hides, flour; woodworking; foundries
Santos, Brazil.	160,000	Resort; coffee, bananas, flour
São Paulo, Brazil.	1,217,330	Distributing center; coffee, rice, frozen meat, cotton, sugar
São Salvador, Brazil.	363,726	Sugar refining; cacao, tobacco, coffee, rubber, cotton, diamonds
Valparaíso, Chile.	193,205	Seaport; machine-shops; farm products, shoes, candles, furniture

WEST INDIES

CITY	POPULATION	INTERESTING FACTS
*Habana, Cuba.	568,913	Seaport; sugar, tobacco products, hosiery, leather, furniture; foundries
*Kingston, Jamaica.	62,707	Seaport; fruit preserving, woodworking; ice, cigars, shirts, baskets
*Nassau, Bahamas.	19,756	Resort; sponges, sisal, tomatoes, liquor
*Port-au-Prince, Haiti.	115,000	Seaport; sugar mills; brewing; cotton-seed oil, tobacco products
*Port-of-Spain, Trinidad.	89,550	Sugar, cacao, asphalt, coconuts, oil
*San Juan, Puerto Rico.	137,215	Coaling station; sugar-cane, pineapples, cigars, coffee, ice
Santiago de Cuba, Cuba.	107,125	Sugar, iron, manganese, tobacco, wood, brick, preserves, wax
*Trujillo City, Dominican Republic.	71,297	Sugar-cane, cotton, cacao, hides, wood, skins, coffee

INDEX AND PRONUNCIATION LIST

To the pupil: This index will help you find things in this book. Page numbers which refer to maps are indicated by *m*. Many of the words are marked to show you how to pronounce them.

PRONUNCIATION KEY

a hat, cap	k kind, seek	TH then, smooth
ā age, face	l land, coal	u cup, butter
ā care, air	m me, am	û full, put
â father, far	n no, in	ü rule, move
b bad, rob	ng long, bring	ū use, music
ch child, much	o hot, rock	v very, save
d did, red	ō open, go	w will, woman
e let, best	ô order, all	y you, yet
ē equal, see	oi oil, voice	z zero, breeze
ēr term, learn	ou house, out	zh measure, seizure
f fat, if	p paper, cup	ə represents:
g go, bag	r run, try	a in about
h he, how	s say, yes	e in taken
i it, pin	sh she, rush	i in pencil
ī ice, five	t tell, it	o in lemon
j jam, enjoy	th thin, both	u in circus

FOREIGN SOUNDS

Y as in French du. Pronounce ē with the lips rounded as for English ü in *rule*.

œ as in French peu. Pronounce ā with the lips rounded as for ō.

N as in French bon. The N is not pronounced, but shows that the vowel before it is nasal.

H as in German ach. Pronounce k without closing the breath passage.

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